

REAL PROPERTY MASTER PLAN

FORT MONROE VIRGINIA



INSTALLATION DESIGN GUIDE - 1997

INSTALLATION DESIGN GUIDE

for

FORT MONROE

VIRGINIA

MARCH 1997

Prepared for:

Commander
Fort Monroe, Virginia

Prepared Under the Guidance of:

U.S. Army Center for Public Works
Director of Facilities Management
Planning and Real Property Division
Alexandria, Virginia

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Roanoke & Alexandria, Virginia
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Fort Monroe

Executive Summary



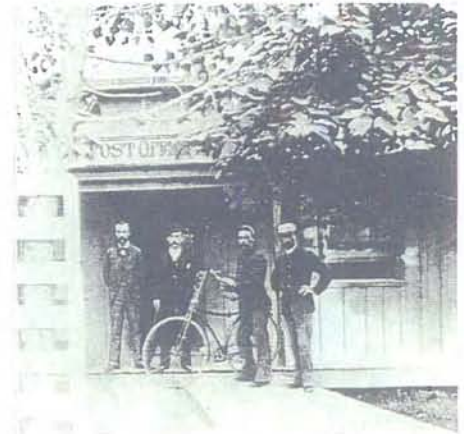
MAKE NO LITTLE PLANS; *they have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work; remembering that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever growing insistency. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty. Daniel Burnham 1907*

The Installation Design Guide

Fort Monroe, as a TRADOC installation, is charged with the responsibility of training the Army of tomorrow and providing the environment within which soldiers-in-training spend their most formative years. This environment must be one which fosters pride, commitment, and professionalism, while encouraging the individual to set high standards of personal performance. To achieve these goals, the design of the physical environment itself must demonstrate the value of excellence.

The Installation Design Guide is a tool for achieving excellence in installation design. It is a manual which establishes specific design criteria and outlines a program to maintain and enhance Fort Monroe's visual assets while correcting visual liabilities. The overall goal of these efforts to improve the quality of design is intended to develop an installation environment that will inspire pride, promote morale, and increase productivity.

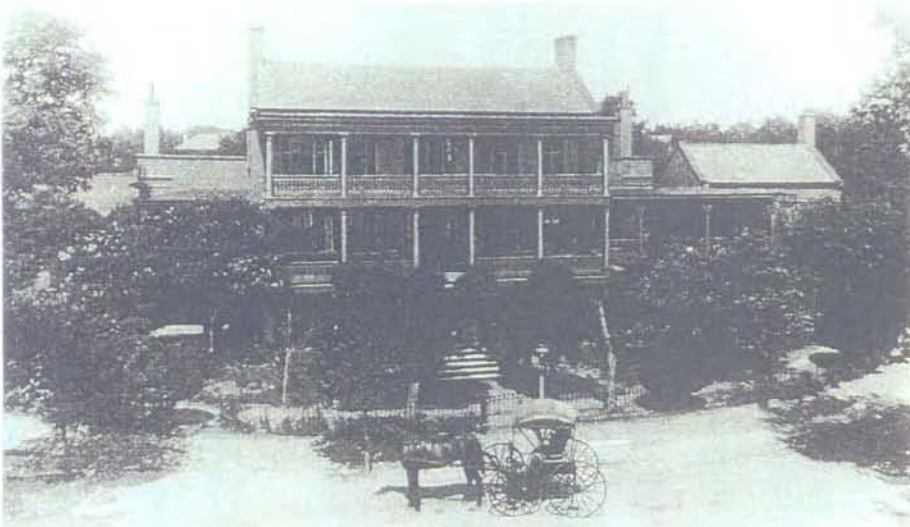
The Installation Design Guide (IDG) has been developed through a careful process beginning with a thorough analysis of the various visual zones which make up the overall environment of the post. Out of this analysis has emerged an understanding of the overall image of Fort Monroe and the establishment of a theme for developing specific goals, priorities, and actual design guidelines for the installation. These guidelines address specific physical design issues relating to particular areas as well as general issues concerning prototypical conditions throughout the installation. In general, the scope of the IDG encompasses all significant aspects of Fort Monroe's visual environment which can be influenced by construction or maintenance.



POSTMASTER AND HIS STAFF, C. 1890.
(SOURCE: CASEMATE MUSEUM)



POST HEADQUARTERS BUILDING AS SEEN
FROM ACROSS CANNON PARK, C. 1910.
(SOURCE: CASEMATE MUSEUM)



QUARTERS ONE, C. 1880. (SOURCE: CASEMATE MUSEUM)

The IDG's design criteria are to be implemented by the Director of Public Works (DPW). The DPW staff will apply the IDG directly in their own work and will include relevant sections of the design criteria with their instructions to Architectural/Engineering design firms who will be contracted to design future facilities at Fort Monroe.



CENTRAL PARADE GROUND, C. 1880. THE BARRACKS SEEN IN THE BACKGROUND ARE NOW ADMINISTRATIVE BUILDING NUMBER 5. (SOURCE: CASEMATE MUSEUM)



COMMANDER'S RESIDENCE AT CONTINENTAL PARK.

Visual Analysis

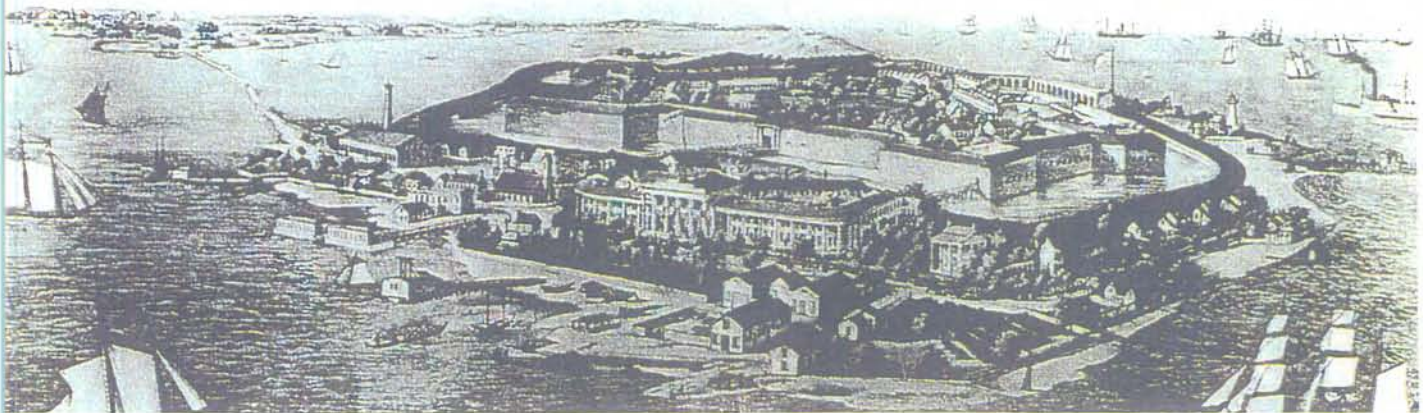
The unique character of Fort Monroe is a result of its long history as a coastal artillery fortification and its dramatic site protecting the mouth of the Hampton Roads. The post is essentially an island with the main built-up areas clustered in and around the historic fort at the southern tip - Old Point Comfort. Viewed from the nearby Hampton Roads bridge-tunnel (I-64), Fort Monroe appears as a 19th century island village of stately brick buildings with pitched roofs and a lush canopy of tall trees. This is indeed the image presented as one enters the installation along Ingalls Road. The image is that of a well-mannered academy. The continuous use of brick, highly stylized architecture, and modest building scale (two and one-half to three stories) allow both residential and administrative buildings to form a single unified impression of a campus setting and portrays a very prestigious image for the central administrative functions of TRADOC headquarters. The finely groomed Continental Park and the distinctive residences of Commander's Row provide a dramatic terminus for Ingalls Road with panoramic views across the waters of the Chesapeake Bay.



DISTINCTIVE ARCHITECTURAL DETAILING OF THE INGALLS ROAD OFFICERS' RESIDENCES.

The symbolic heart of Fort Monroe is the historic fort with its stone bastions and surrounding moat. The encircling fortifications completely enclose a quiet enclave of historic 19th century brick barracks and officers' quarters. The barracks were somewhat modified to accommodate present-day administrative functions. However, the requirements of vehicular access and parking have had the greatest negative impact on this historic area where roadways and parking vie for precious open space, although this is somewhat offset by the green open space of the historic parade grounds in the center of the inner moat.

Immediately to the north of the historic fort continuing along Fenwick Road, the quality of the environment changes abruptly. Post World War II housing and service buildings are grouped along the seawall edge, occasionally interrupted by the massive weathered remains of concrete coastal batteries. While the waterfront location provides an exciting setting for family housing, the condition of the buildings, the scarcity of planting, and the ad-hoc parking/personal storage facilities create an environment that is less than optimal. Design and careful coordination of the future development projects planned for this area should improve spatial organization and create a well designed environment with a unified image.



FORT MONROE IN 1861. (SOURCE: CASEMATE MUSEUM)

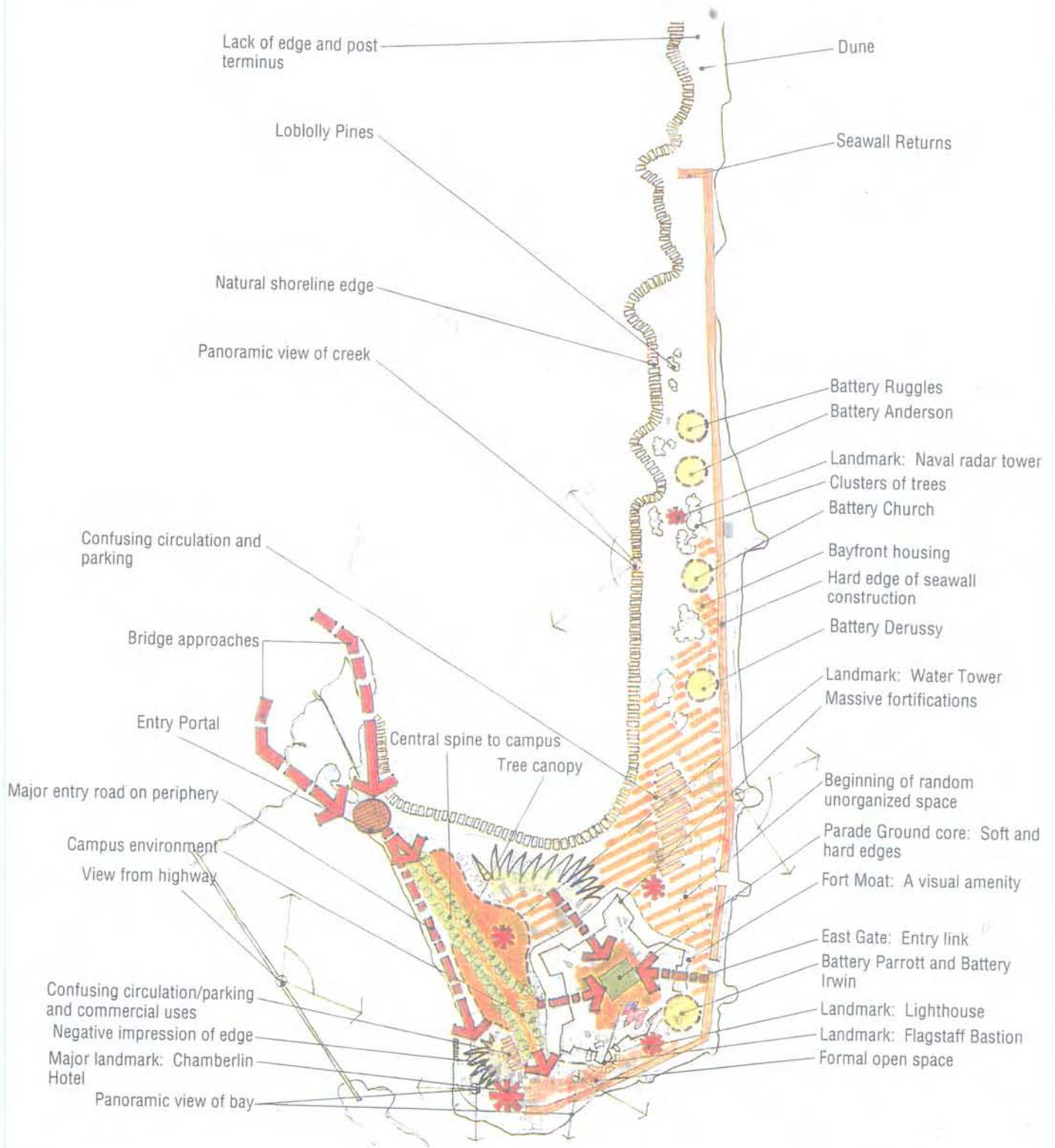


Image Definition

The overall visual image of Fort Monroe has evolved through its rich history and is enhanced by its continuing active role as TRADOC headquarters. The island-like setting and commanding panoramic views over the surrounding waters form the basis for a visual theme. The stone walls, earthen ramparts, and surrounding moat of the historic fort dominate the plan of the present installation and represent the historic military origins of the post. The center of activity at Fort Monroe today is the village-campus environment of the Ingalls Road area with its distinctive residential scale architecture and tall canopy trees. Finally, the open space of the narrow sand spit to the north, punctuated by the remains of coastal batteries and groves of live oaks, is the environment in which many installation personnel live and recreate and the area in which much of Fort Monroe's future development will occur. These images establish the general visual theme upon which the IDG is based.

The installation as a whole is a composite of separate visual zones, each having an individual character, although linked by a common design theme. Identifying visual zones allows design criteria to respond appropriately to the particular characteristics of each area within Fort Monroe. In some cases a specific type of activity or land use is the factor which distinguishes one zone from another. More often, however, a visual zone encompasses an area much larger than one single land use reservation and is defined by the positions of buildings, roadways, and landscape elements such as the moat and bastions or the batteries.

In order to achieve a sense of visual orderliness, facilities within each visual zone must be coordinated by design criteria appropriate for that particular area. Therefore, the design criteria are organized according to these zones. The drawing opposite illustrates the major visual zones of Fort Monroe.

Island Setting

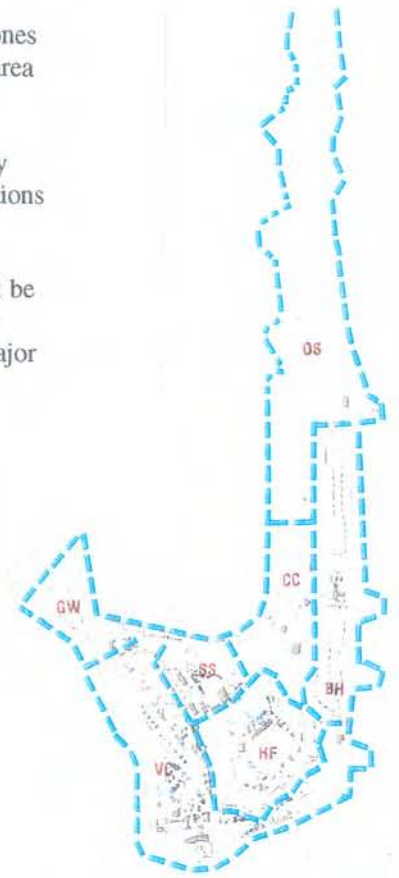
Fort & Moat

Village & Campus

Natural Landscape



VILLAGE-CAMPUS ENVIRONMENT OF THE INGALLS ROAD AREA.



Movement and Circulation Systems



A PINE GROVE IN THE RECREATIONAL AREA.

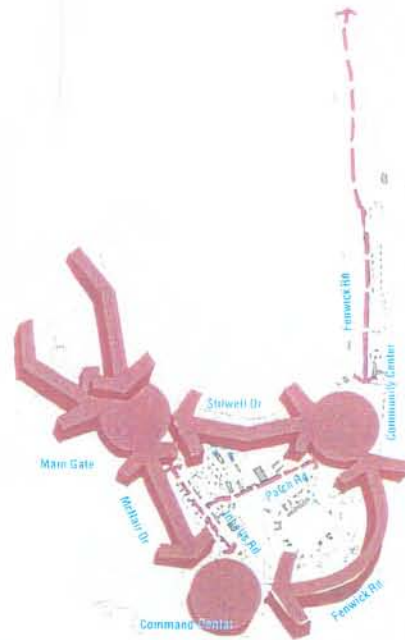


WATERFRONT PROMENADE AT CONTINENTAL PARK.

The primary organizing principle of the physical environment at Fort Monroe and to a large extent, a major determinant of the visual quality are the main circulation routes. The spatial patterns formed by streets and pedestrian pathways as well as open spaces function as organizing elements, and the visual image of the installation is formed by what one sees while moving through these spaces.

The three primary roads, McNair Drive, Fenwick Road, and Stilwell Drive form a triangular loop encircling the historic fort and main cantonment area. Their intersection form three key nodes; at the entrance gate, at the Headquarters/Point Comfort area, and at the future Community Service Center area. Although these roads function as the primary routes, their actual physical design does not reflect their hierarchy and in some locations should be upgraded to maintain a consistent quality and provide a strong organizing element. These efforts should be focused in the new DoD Corporate Office Park area, at the future Community Activities Center, along Stilwell Drive, and at the main entrance gate.

GW GATEWAY
VC VILLAGE/CAMPUS
HF HISTORIC FORT
CC COMMUNITY CENTER
SS SERVICE/STORAGE
WH WHERRY HOUSING
OS OPEN SPACE



Assets and Liabilities

A clear understanding of the strengths and weaknesses of the existing visual environment at Fort Monroe is essential to target future efforts to improve the quality of the installation's design. The following chart identifies the most significant visual assets and liabilities for each visual zone. These represent the positive features which should be preserved and enhanced because they significantly contribute to the image of quality, as well as the negative aspects which detract and should be corrected.

<i>Visual Zones</i>	<i>Assets</i>	<i>Liabilities</i>
<i>Gateway</i>	Strong focus at convergence of Mercury Boulevard (McNair Drive) and Water Street (Ingalls Road).	Directional ambiguity, caused by complex traffic intersection.
<i>Village-Campus</i>	High quality environment and distinctive architecture of Ingalls Road and Continental Park areas.	Lack of screening from McNair Drive to rear of houses creates "back door" appearance.
<i>Fort/Moat</i>	Unique historic fortifications and structures. Park-like quality of central parade ground.	Problems caused by vehicular access and parking. Removal of architectural detail from historic garrison buildings.
<i>Wherry Housing</i>	Waterfront location adjacent to open recreation space.	Scarcity of planting, condition of parking areas, and lack of individuality. Poor condition of buildings and lack of architectural detail.
<i>Community Activities Center</i>	New planned facilities are an opportunity to achieve significant improvements.	Lack of orientation and cohesive spacial organization. Barren, undefined open space with seemingly random building and roadway locations.

Assets and Liabilities***Visual Zones******Assets******Liabilities******Service and Storage Area***

Consolidation of all service/storage facilities in a single area.

Awkward siting of buildings along Patch Road.

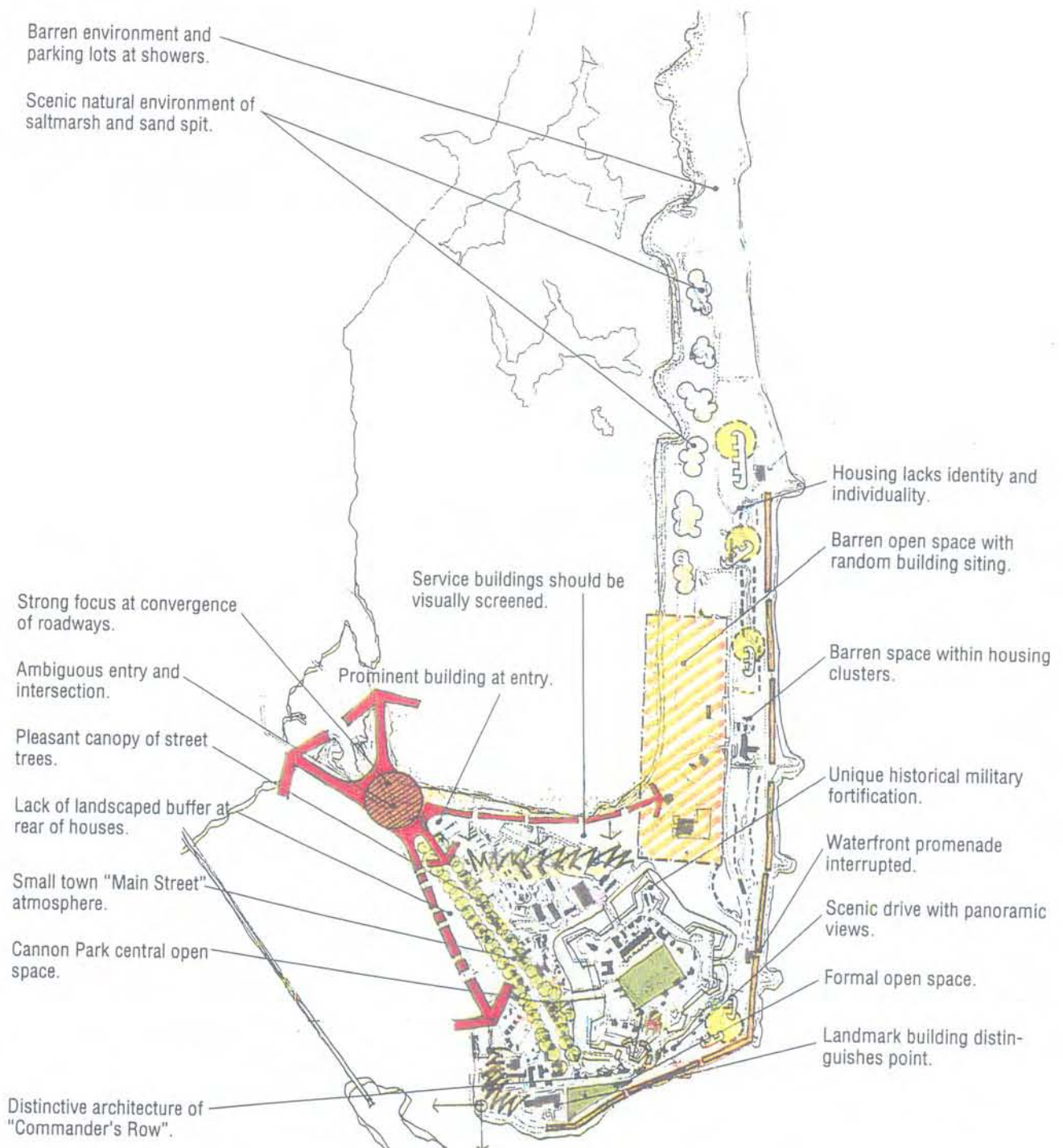
Unscreened view from Stilwell Drive to rear of service building and storage yards.

Open Space and Recreation Areas

Scenic natural environment.

Ad-hoc appearance of recreation facilities and parking areas.

Assets and Liabilities Map



Goals and Objectives

The image of Fort Monroe is the product of a multitude of decisions made over a long period of time by many individuals at various levels of responsibility. This continuous decision-making process must be directed by an overall long-range strategy aimed at developing a coordinated image of quality and excellence. This strategy must consider not only the activities and physical features that exist on the installation today, but also future programs that can be developed to support these activities. The Design Guide will be directed by the following goals and objectives which represent an overall strategy for installation design at Fort Monroe and are prioritized in the following manner.

1. *Maintain and enhance the historical character of the fort. Improve the visual image of the historic gates.*

Vehicular circulation through the three gates and around Bernard Drive should be accommodated while carefully protecting the historical nature of the stone fortifications. Parking areas should be separated from Bernard Drive whenever possible and a buffer space created between buildings and parking. The large parking area at the central parade ground should be more significantly screened and set back from adjacent buildings.

2. *Maintain and enhance the village/campus scale of Ingalls Road and the distinctive formal quality of Commanders Row and Continental Park.*

Renovations to existing buildings in the Ingalls Road area, which may be required to accommodate new uses, should maintain the historic quality of those buildings. The siting and general massing of major new structures, should be carefully designed to maintain the existing residential scale along Ingalls Road. The view from Fenwick Road to Flagstaff Bastion should be improved by the relocation of parking and overhead utilities.

3. *Strengthen the sense of arrival at the entrance gateway.*

Clarify the distinction between the Ingalls Road and McNair Drive approaches. Access to and from the new community activities center should be improved with careful treatment of the Stilwell Drive intersection at the entrance gate area.



THE MAIN GATE AT THE HISTORIC FORT.



DISTINCTIVE ARCHITECTURAL QUALITY OF THE TRADOC HEADQUARTERS COMPLEX.



POST EXCHANGE.

Goals and Objectives

1. Maintain and enhance the historical character of the fort and improve the visual image of the historic gates.
2. Maintain and enhance the village/campus scale of Ingalls Road and the distinctive image of Commanders Row and Continental Park.
3. Strengthen the sense of arrival at the entrance gateway.
4. Coordinate siting and design of new facilities in the community center area to develop a strong sense of order and orientation.
5. Improve the quality of the environment within the Wherry Housing areas.
6. Maintain and enhance the natural quality of open space, recreation areas, and the water's edge.
7. Develop a coordinated signage system to increase clarity and reduce visual clutter.

4. *Coordinate siting and design of new facilities in the community center area to develop a strong sense of order and orientation.*

A detailed area site plan should be developed to coordinate siting and design of all proposed facilities. Buildings, parking areas, and access roadways should be planned so that an overall organization is clearly perceived. Access directly from the main gate via Stilwell Drive should be encouraged and signage should clearly direct the visitor to the proper destination. Parking areas should be landscaped and separated from adjacent roadways by landscaped buffers. Pedestrian pathways should respond to desired routes and link the facilities together. In general, design of the architecture and site should maintain the highest standards achievable with the available resources.



WHERRY HOUSING OVERLOOKING THE CHESAPEAKE BAY.

5. *Improve the quality of the environment within the Wherry Housing area.*

Upgrade the general quality of the buildings, using materials and design details appropriate to this waterfront site. Organize the parking areas and personal storage enclosures and provide suitable landscaping throughout the area. Enhance the historic quality of the concrete batteries with perimeter landscape treatment.



THE PICNIC AREAS ALONG FENWICK ROAD.

6. *Maintain and enhance the natural quality of open space, recreation areas, and the water's edge.*

Improve the appearance of recreation areas by careful placement of play equipment, dumpsters, toilets, picnic tables, and other fixtures. Organize and define the extent of parking areas, separating these areas from the main roadway. Eliminate non-essential mowing where appropriate to allow natural vegetation to return to less frequently used areas.

7. *Develop a coordinated signage system to increase clarity and reduce visual clutter.*

Refine the installation-wide signage system incorporating a hierarchy of sizes appropriate to each purpose. Organize information for clarity and ease of legibility. Reduce redundancy by consolidating signage where possible.

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Executive Summary

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Section 3

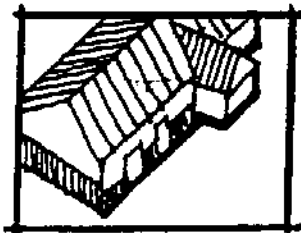
Design Criteria

1. Site Planning
2. Architecture
3. Landscape
4. Site Furnishings
5. Lighting & Utilities
6. Signs

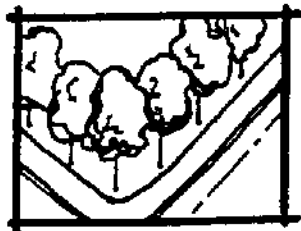
Preface

How to Use This Document

1 IDENTIFY NATURE OF PROPOSED PROJECT



Building



Planting



Maintenance

Etc.

Intended Use of the IDG

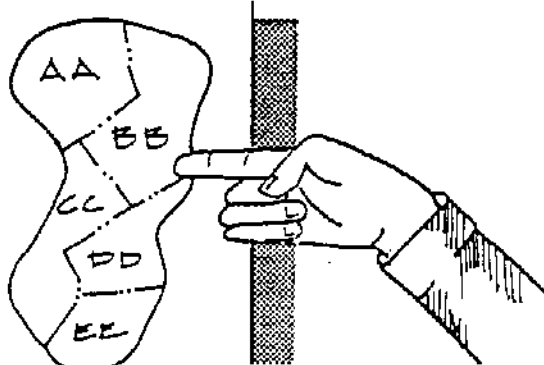
The Fort Monroe Installation Design Guide (IDG) is intended to be used by persons in the DPW office responsible for preparing requests for proposals, design contracts, construction contracts, or maintenance work orders. This document formulates directives to assist the designer in achieving as high a standard of design quality as possible. It is to be used as a component part of the Fort Monroe Master Plan and is to be used in conjunction with other more detailed and specific Technical Manuals.

The Installation Design Guide (IDG) is a tool for achieving excellence in installation design. It is a manual which establishes specific design criteria and outlines a program to maintain and enhance Fort Monroe's visual assets while correcting visual liabilities. Design guidelines address specific design issues. In general, the scope of the IDG encompasses all significant visual aspects of Fort Monroe's exterior physical environment which can be influenced by construction or maintenance.

Implementing the IDG Design Criteria

Development of major new facilities, along with numerous smaller improvement projects, represents the opportunity to improve installation design at Fort Monroe. These projects bring the resources necessary for physical improvements to Fort Monroe, and each step in their planning and design is the very process through which the goal of installation excellence is realized.

2 IDENTIFY APPROPRIATE VISUAL ZONE

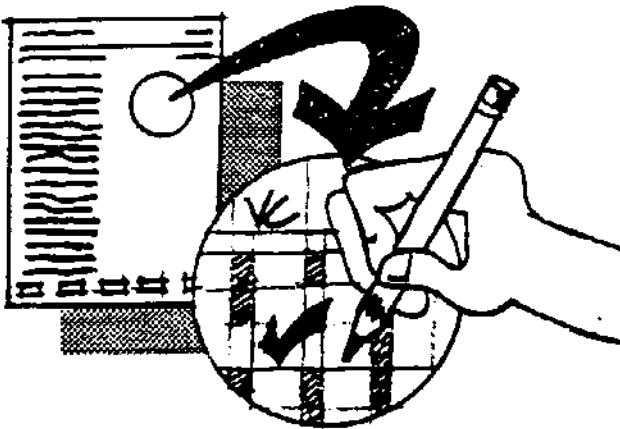


VISUAL ZONE MAP

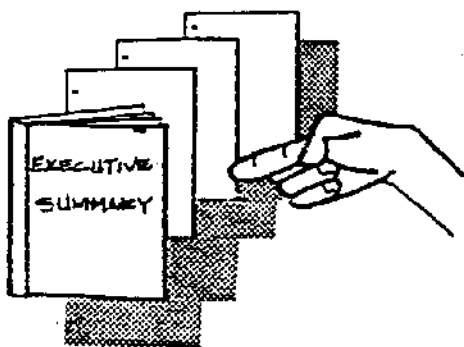
This goal cannot be achieved simply on a project-by-project, or problem-by-problem basis without coordination in terms of an overall concept. The built environment of Fort Monroe must be carefully nurtured through a master planning process which allows each design problem to be resolved as part of a unified conceptual design *theme*.

The purpose of the IDG is to provide this theme through *design criteria*. The skill and judgment of the DPW staff administering these guidelines is essential to the successful planning and design of future projects. The design criteria represent general principles which must be carefully interpreted and incorporated by the DPW

3 IDENTIFY DESIGN CRITERIA. CHECKLIST APPROPRIATE CRITERIA TO BE SELECTED



4 SELECT & COPY APPROPRIATE BACKGROUND MATERIALS



Executive Summary
Section 1 Introduction and Overview
Section 2 Visual Zone

staff into the particular project in the context of that project's special constraints and opportunities.

The information contained here should be considered a working document requiring updating and revisions. New design criteria and directives should be included as they become operative. The success of this design overview effort will be dependent upon how rigorous the DEH staff is in the proper application of these design guidelines.

How to Use This Document

In utilizing the information in this document, it is necessary to first define the nature of the proposed project. Secondly, the Visual Zone in which the proposed project is located should be identified. Finally, appropriate Design Criteria related to the proposed project should be selected and put together into a project design package.

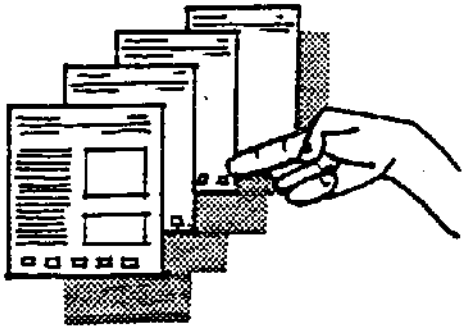
The information in this document is organized in the following manner. An Executive Summary has been prepared as a separate stand-alone document that provides a broad overview of the post's image and goals for achieving an improved visual environment. Section 1 *Introduction and Overview* provides further background on the post's historical context and functional activities. Section 2 *Visual Zones* describes and defines each of the seven visual zones and discusses broad design objectives/recommendations for each zone. Section 3 *Design Criteria* presents detailed design guidelines and criteria for new projects as well as the upgrading and retrofitting of existing development.

Section 3 *Design Criteria* incorporates the bulk of the design guideline information. The Design Criteria are organized and presented in six broad design categories:

1. Site Planning
2. Architecture
3. Landscape
4. Site Furnishings
5. Lighting and Utilities
6. Signs

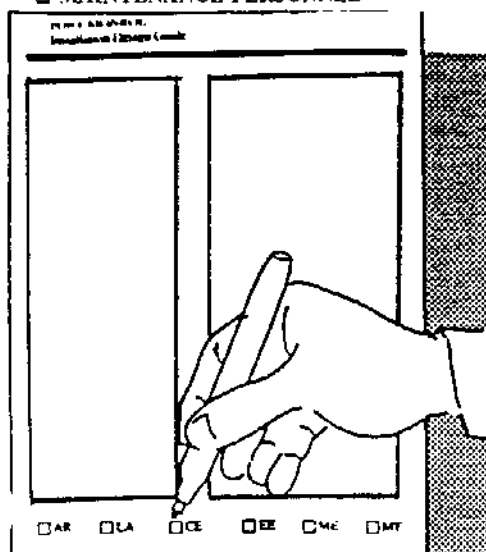
The detailed design information in each of these sections is presented in a format that is appropriate to a specific visual zone(s) and specific to a particular design discipline(s). The DPW staff has the responsibility of identifying the appropriate information to be included in each project design package.

5 SELECT AND COPY APPROPRIATE DESIGN CRITERIA PAGES



6. SELECT APPROPRIATE DESIGN DISCIPLINE(S) COPY & CHECK

- ☐ ARCHITECTURE
- ☐ LANDSCAPE ARCHITECTURE
- ☐ CIVIL ENGINEERING
- ☐ MECHANICAL ENGINEERING
- ☐ ELECTRICAL ENGINEERING
- ☐ MAINTENANCE PERSONNEL



R&K ENGINEERING

Components of a Project Design Package

After identifying the nature and proper visual zone of the proposed project or maintenance work order, the DPW staff member should proceed to select and copy the appropriate Project Design Package materials. These would include:

1. Background Materials

If the project is of a large scale and being designed by an outside Architect/Engineering (A/E) firm unfamiliar with this post, a copy of the Executive Summary, a copy of Section 1 *Introduction and Overview*, and a copy of the pertinent Section 2 *Visual Zone* sheets should be put together for the A/E's general information and reference. If the project is of a smaller scale or being designed by "in-house" staff already familiar with the post, this background material is obviously not required.

2. Design Criteria Checklist

The Design Criteria Checklist (sheet V of the *Preface Section*) should then be copied and the appropriate boxes marked that are pertinent to the proposed project, within the appropriate visual zone, and related to the required design disciplines. On the Checklist, two boxes are provided in each Visual Zone. If a Design Criteria Sheet is applicable to that Visual Zone, it will be shaded. The other box should be marked for reference in selecting the Design Criteria (DC) Sheets.

3. Design Criteria Sheets

The staff member should then turn to Section 3 *Design Criteria* and with the annotated checklist, pull out and copy the appropriate Design Criteria Sheets. Care should be taken to replace all sheets in their proper order and to confirm that the Design Criteria are appropriate to the proposed project.

Organization of Design Criteria Sheets

The adjacent illustration describes the organization of information on each page of the Design Criteria. A further description identifies in more detail the Design Element that the sheet refers to within the broader Design Category. Where alternative approaches or options exist, they are numbered and identified. Six boxes that refer to different Design Disciplines are:

DESIGN ALTERNATIVE OR OPTION, NUMBER

DESIGN ELEMENT NUMBER

DESIGN CATEGORY

1. Site Planning

Bikeway System

xx, zz

Design Element Title/Description

Appropriate Visual Zone

Appropriate Design Discipline

□ □ □ □ □ □

AR Architecture
LA Landscape Architecture
CE Civil Engineering
ME Mechanical Engineering
EE Electrical Engineering
MP Maintenance Personnel

The staff member should check the appropriate box for the appropriate design discipline. On any given project, it is likely that a single Design Criteria page could be useful to several different Design Disciplines. It is the responsibility of the DPW staff member to assure that all necessary information in the Project Design Package is complete and appropriate for each of the disciplines.

Reference is made throughout this document to Visual Zones. They are described in detail in *Section 2* of this manual. For reference, the Visual Zone Designations are:

Key

GW	Gateway
VC	Village/Campus
HF	Historic Fort
CC	Community Center
SS	Service/Storage
BH	Bayfront Housing
OS	Open Space

TYPICAL DESIGN CRITERIA PAGE

Design Criteria Checklist

	GW	VC	HF	SS	CC	BH	OS
1. Site Planning							
1.1 Design for Climatic Conditions	•	•	•	•	•	•	•
1.2 Building Orientation	•	•	•	•	•	•	•
1.3 Building Setbacks	•	•	•	•	•	•	•
1.4.1 Roadway System Hierarchy	•	•	•	•	•	•	•
1.4.2 Pedestrian Pathway Systems	•	•	•	•	•	•	•
1.4.3 Pedestrian Pathways: Cross Sections	•	•	•	•	•	•	•
1.4.4 Bikeway System	•	•	•	•	•	•	•
1.4.5 Bikeway Details	•	•	•	•	•	•	•
1.5.0 Off-Street Parking General Notes	•	•	•	•	•	•	•
1.5.1 Off-Street Parking Standard Dimensions	•	•	•	•	•	•	•
1.5.2 Off-Street Parking Small Lots	•	•			•	•	•
1.5.3 Off-Street Parking Large Parking Fields	•	•	•	•	•	•	•
1.5.4 Off-Street Park Integrating Pedestrian Path	•	•	•	•	•	•	•
1.5.5 Off-Street Parking Planted Islands	•	•	•	•	•	•	•
1.6.1 Access to Buildings	•	•	•	•	•	•	•
1.6.2 Access to Buildings, Parking in Rear	•	•	•	•	•	•	•
1.6.3 Access to Buildings, Parking to Side	•	•	•	•	•	•	•
1.6.4 Access to Buildings, Parking in Front	•	•	•	•	•	•	•
1.7 Grading in Flood-Prone Areas	•	•	•	•	•	•	•
1.8 Orientation of Warehouses and Storage Yards	•	•	•	•	•	•	•
1.9.1 Wherry Housing Area	•	•	•			•	
1.9.2 New Family Housing Development					•	•	•
QAR QLA QCE QME QEE QMT							

Design Criteria Checklist

	GW	VC	HF	SS	CC	BH	OS
2. Architecture							
2.0 General Notes	•	•	•	•	•	•	•
2.1.1 Massing: Large Buildings	•	•	•	•	•	•	•
2.1.2 Building Heights	•	•	•	•	•	•	•
2.1.3 Massing: Taller Buildings		•					
2.1.4 Massing: Taller Buildings		•					
2.2.1 Fenestration: Punched Openings	•	•	•	•	•	•	•
2.2.2 Fenestration: Window Arrangement	•	•	•	•	•	•	•
2.3.1 Design Character: Facade Detail	•	•	•	•	•	•	•
2.3.2 Design Character: Detailing of Openings	•	•	•				
2.3.3 Design Character: Administration Buildings	•	•	•	•			
2.3.4 Design Character: Community Support Bldgs					•		
2.3.5 Design Character: Community Support Bldgs					•	•	•
2.3.6 Design Character: Storage Buildings				•			
2.3.7 Design Character: Storage Buildings	•	•		•			
2.3.8 Design Character: Existing Wherry Housing						•	
2.3.9 Design Character: New Family Housing					•	•	•
2.4.1 Important Building Entrances	•	•	•	•	•	•	•
2.4.2 Ramps at Building Entrances	•	•	•	•	•	•	•
2.5.1 Alterations & Additions: Securing Existing Openings	•	•	•	•	•	•	•
2.5.2 Alterations & Additions: Historic Casemates			•				
2.6 Materials & Colors	•	•	•	•	•	•	•

☐ AR
 ☐ LA
 ☐ CE
 ☐ ME
 ☐ EE
 ☐ MT

Design Criteria Checklist

	GW	VC	HF	SS	CC	BH	OS
3. Landscape							
3.0 Introduction	•	•	•	•	•	•	•
3.1.1 Planting - Primary Roadways	•	•		•	•		
3.1.2 Planting -Secondary Roads	•	•			•	•	•
3.1.3 Planting - Secondary Roads			•				
3.1.4 Planting Secondary Roads					•	•	•
3.1.5 Street Tree Planting	•	•	•	•	•	•	•
3.2.1 Screening Parking: Planting	•	•	•	•	•	•	
3.2.2 Screening Parking: Low Walls	•	•	•				
3.2.3 Screening Secured Areas				•	•		
3.2.4 Screening Secured Areas - Berm				•	•		
3.2.5 Screening Dumpsters - Masonry Walls	•	•	•		•		
3.2.6 Screening Dumpsters - Wood Walls			•		•	•	•
3.2.7 Screening Dumpsters -Planting	•	•	•	•	•	•	•
3.2.8 Locating Dumpsters				•	•	•	
3.2.9 Screening Remote Toilets							•
3.2.10 Screening Mechanical Equipment	•	•	•	•	•	•	•
3.2.11 Screening Loading Docks	•	•	•	•	•		
3.3.1 Plazas & Courtyards	•	•	•		•	•	
3.3.2 Plazas & Courtyards	•	•	•		•		
3.3.3 Canon Park		•					
3.3.4 Planting - Building Entrances	•	•	•		•		•
3.4 Landscaping Proximity to Buildings	•	•	•			•	

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Design Criteria Checklist

	GW	VC	HF	SS	CC	BH	OS
3.4.1 Planting - General Open Areas OS							•
3.5.1 Planting Edge of Seawall						•	•
3.5.2 Planting Historic Batteries						•	•
3.5.3 Wherry Housing						•	
3.6.0 Planting Introduction	•	•	•	•	•	•	•
3.6.1 Planting Matrix	•	•	•	•	•	•	•
3.7 Paving Materials	•	•	•	•	•	•	•

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Design Criteria Checklist

	GW	VC	HF	SS	CC	BH	OS
4. Site Furnishings							
4.1 Site Furnishings Matrix	•	•	•	•	•	•	•
4.1.1 Benches	•	•	•	•	•	•	•
4.1.2 Seating				•	•	•	•
4.1.3 Field Bench							•
4.1.4 Bollards	•	•	•				•
4.1.5 Bollards				•	•	•	•
4.1.6 Trash Receptacles	•	•	•	•	•	•	•
4.1.7 Fencing	•	•	•			•	
4.1.8 Fencing	•	•	•	•	•		
4.1.9 Phone Booths/Bus Shelter	•	•	•	•	•	•	•
4.1.10 Flagpoles	•	•	•		•		•
4.1.11 Drinking Fountains	•	•	•	•	•	•	•
4.1.12 Water Spigot							•
4.1.13 Bike Rack	•	•	•	•	•	•	•
4.2.1 Bench/Sidewalk	•	•	•		•		
4.2.2 Bus Shelters	•	•	•	•	•	•	
4.2.3 Relationships Building/Open Spaces	•	•	•		•		
4.2.4 Relationships Plaza/Courtyards	•	•	•		•		
4.2.5 Seating Plazas/Courtyards	•	•	•		•		
4.2.6 Recreation/Picnic Areas							•

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Design Criteria Checklist

	GW	VC	HF	SS	CC	BH	OS
5. Lighting & Utilities							
5.0 Introduction	•	•	•	•	•	•	•
5.1 Light Matrix	•	•	•	•	•	•	•
5.2 Light Fixtures	•	•	•	•	•	•	•
5.3 Historic Fixtures	•	•	•				
5.4 General Fixtures	•	•	•	•	•	•	•
5.5.1 Roadway Lighting				•	•	•	•
5.5.2 Parking & Pedestrian Lighting	•	•	•	•	•	•	•
5.5.3 Historic Post Lantern	•	•	•				
5.6 Utilities Matrix	•	•	•	•	•	•	•

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Design Criteria Checklist

	GW	VC	HF	SS	CC	BH	OS
6. Signs							
6.0 General Notes (2 pages)	•	•	•	•	•	•	•
6.1 Sign types and Dimensions (2 pages)	•	•	•	•	•	•	•
6.2.1 Materials & Fabrication; Type A	•	•	•	•	•	•	•
6.2.2 Materials & Fabrication; Type A	•	•	•	•	•	•	•
6.2.3 Materials & Fabrication; Type B	•	•	•	•	•	•	•
6.3 Typography	•	•	•	•	•	•	•
6.4 Colors	•	•	•	•	•	•	•
6.5.1 Sign Layout; Type A	•	•	•	•	•	•	•
6.5.2 Sign Layout; Type B	•	•	•	•	•	•	•
6.5.3 Sign Layout; Type H	•	•	•	•	•	•	•

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Section 1

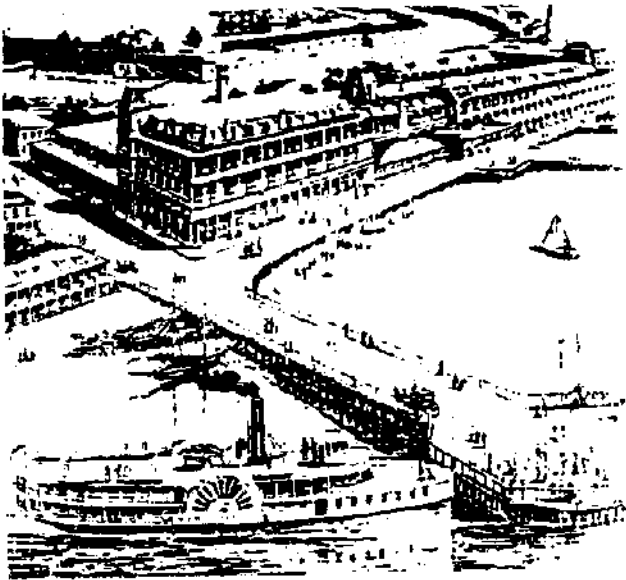
Introduction and Overview



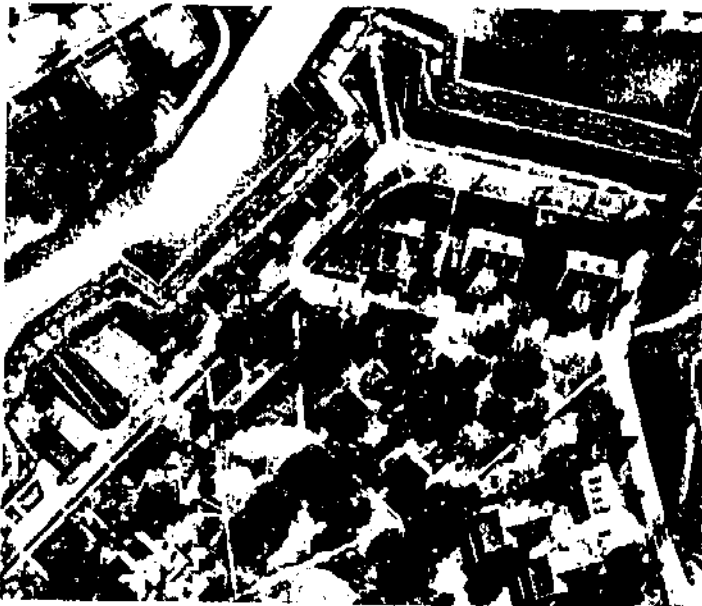
Section 1

Introduction

Background



HISTORIC POINT COMFORT ca. 1885



FLAGSTAFF BASTION, AERIAL VIEW

Activities on Post

Fort Monroe is the headquarters for the United States Army Training and Doctrine Command (TRADOC). The administrative functions are supported by a range of service facilities, including storage, shops and motor pool. A population of about 1,250 military personnel and their families are housed on the post, including the top ranking TRADOC commanders. To support this resident community, there are recreational and community service facilities, including a Combined Activity Center (CAC), post exchange, commissary, child care facilities, swimming pool, service club and dining facilities.

Facilities

The administrative, training, and support activities are accommodated in the unique historical setting of Fort Monroe, utilizing historic structures as well as newer buildings. The island-like land form is the major determinant of Fort Monroe's overall organization. At the heart of the installation is the historic early 19th century stone moated fort, which encloses a garrison of historic brick buildings and the central parade ground. A historic village-like cluster of officer's quarters and administrative buildings now make up the TRADOC Headquarters complex. At the point of the sand spit, Old Point Comfort, stands the Chamberlin Hotel, its profile a highly visible landmark. In the north and west areas of the historic fort are the areas of more recent development, including service buildings, community service facilities and housing.

The massive concrete remains of coastal artillery batteries dot the bay-front edge of the post, each representing a particular phase in the evolution of coastal artillery. Between the batteries lie clusters of housing units. Finally, at the remote and narrow northern neck of the sand spit are the recreation areas and officer's club.

Future Development



PROPOSED SITE FOR NEW
ADMINISTRATIVE BLDG

Future Development Plans

The major thrust of the current installation master plan is the consolidation of administrative functions in a DoD Office Park. The focus of this effort is a group of new administrative buildings planned for the open space zone. This site is immediately adjacent to the community center zone.

Several housing and community service facilities are planned for an area north of the fort. The Post Exchange building was the first step in a coordinated development of this community support area, which is to include a community activities center, gymnasium, skill development center, unaccompanied personnel housing and dining facility.

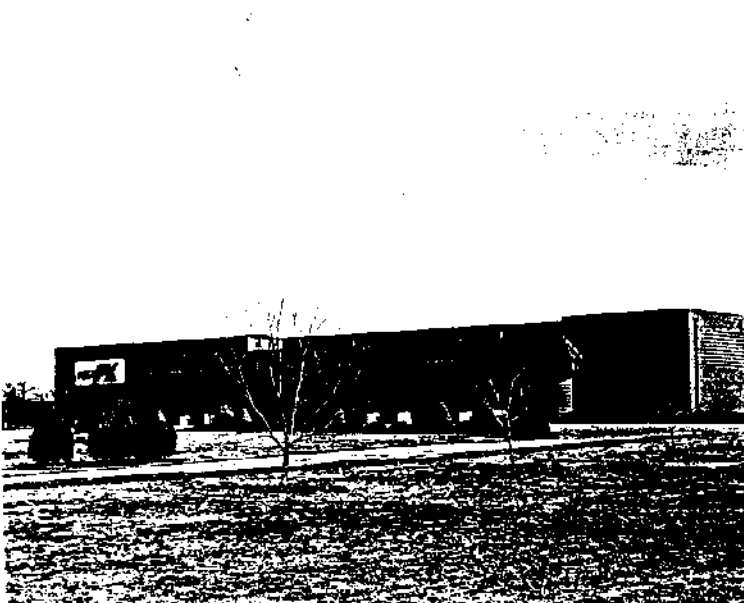
Historical Development

The development of Fort Monroe and its continuing role as both an active post and a national historic landmark is closely tied to its rich historical background.

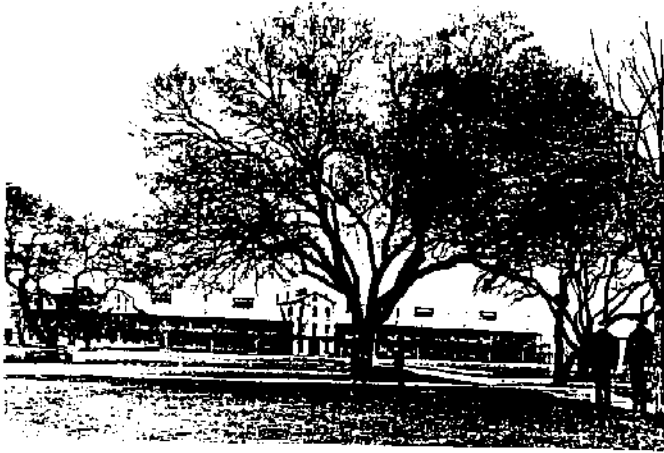
The post's strategic location on the Virginia lower peninsula resulted in its mission to defend the lower Chesapeake Bay. The site on Old Point Comfort, today provides a rich range of both architectural styles and landscapes.

The breadth of these styles has created several distinct visual zones within Fort Monroe and results in a rich visual and historic environment. The visual zones relate to the post's development from the seventeenth century and can be interpreted as direct responses to specific military actions and developments in coastal defense technology.

Today the historic character of Fort Monroe exemplifies American military architecture. Its continuing role as a major command headquarters demonstrates a pride in the rich history of the United States Army. Its well-preserved historic buildings and fortifications represent present day links with the tapestry of events in the history of the lower Chesapeake Bay, Virginia and the United States.



NEW POST EXCHANGE



MAIN BARRACKS

The strategic position of Old Point Comfort, overlooking the channel approach to the Hampton Roads and the Chesapeake Bay, made this post a critical component of the United States coastal defense system throughout the 19th and early 20th centuries. Even earlier, this site served to defend the Colonial settlements on the James River. Old Point Comfort was initially fortified in 1609 when the first timber structures and earthworks of Fort Algernourne were constructed. Although today there are no visible remnants of Fort Algernourne, or of a later brick fort known as Fort George, the stonewalls of Fort Monroe, constructed in 1819-34 bear memory to these earlier fortifications. The transition from the earlier, more primitive fortifications to the stonewalls and moat that we see today, demonstrates the increasing importance of the fort at that time in history. Constructed by plans attributed to the French General Simon Bernard, the historic fort with its hexagonal plan, pointed bastions, earthen ramparts, and moat represents powerful visual evidence of both the Revolutionary War and the Civil War.

The fort has had a rich association with many significant historical personages. In particular, the fortifications recall the work of Robert E. Lee, who as a young engineering officer in 1831-1834, supervised the construction of the moat. During the Civil War, Fort Monroe played its most significant role when it became a primary base for McClellan's Peninsula Campaign, and by remaining in Union hands, was a major factor in the outcome of the war. The historic naval duel between the Confederate ironclad Merrimac and the Union Monitor took place within view of the fort. In February 1865, President Abraham Lincoln met at Fort Monroe to conduct peace negotiations following the end of the war. Jefferson Davis was imprisoned for two years at Fort Monroe following the Civil War, and was held for most of that time in a room which is now a part of the Casemate Museum. All these events are commemorated within the fort.



CASEMATE MUSEUM

The historic fort stands today as the heart of the post. Apart from its historical aspects, the sheer bulk of the fortifications, realized in dressed stone, with bridges and gateways leading into the core and



VIEW OF INGALLS ROAD

the parade ground, enhances the significance of this fortification and provides a backdrop for the daily life of the post.

Within the fort, the 19th century brick residences, with timber porches and surrounding private gardens, typify the quarters built during this era. The domestic revival detailing of timberwork, windows, doors, railings and columns contrast with the stone masonry of the fort walls. The visual strength of these buildings is a result of considerable care and attention in maintaining historical detailing even though new functions and buildings have been added through the years.

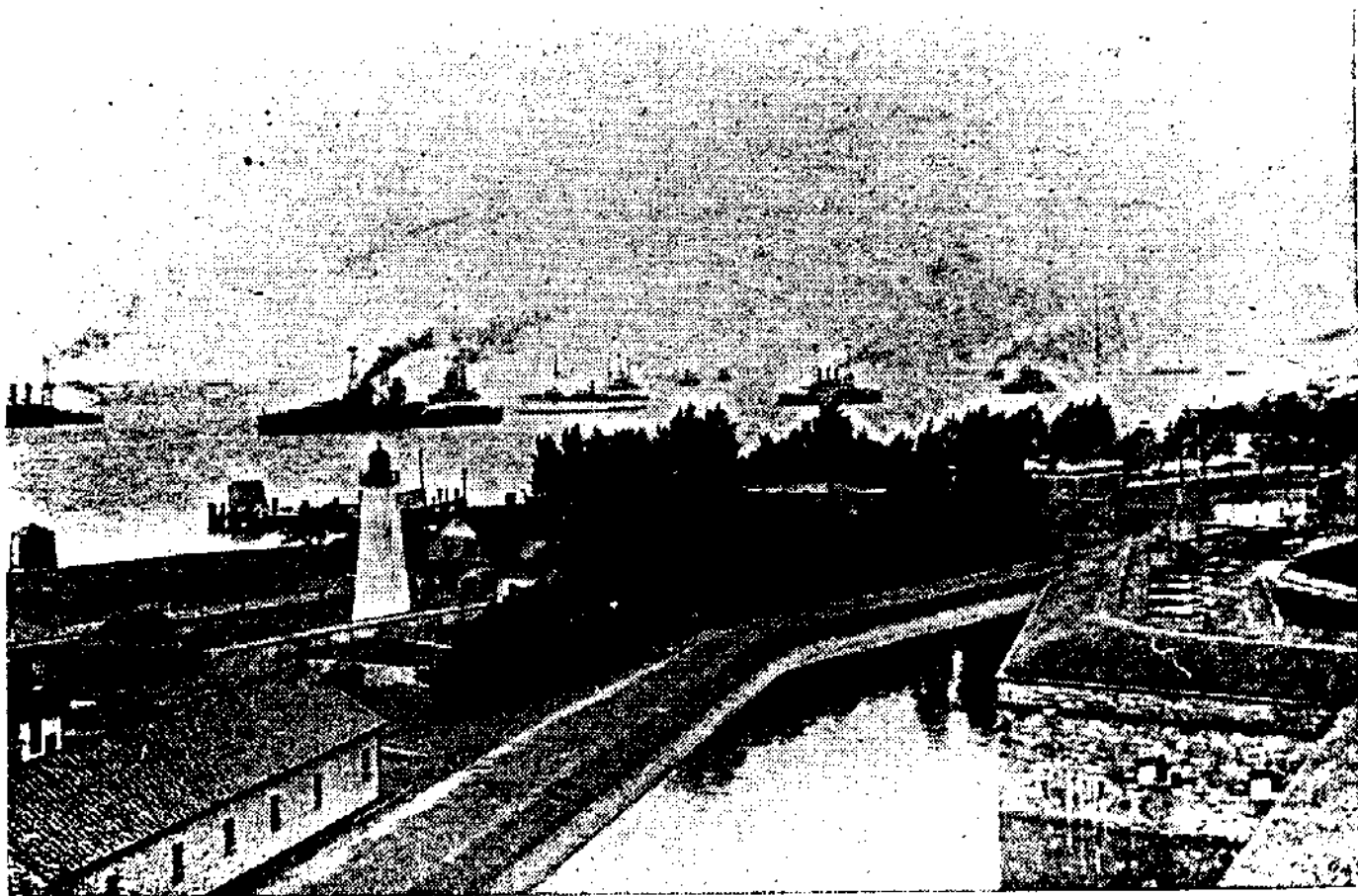
Outside the moat, a village-like community grew up and accommodated both military personnel as well as a resort community which was attracted to the waterfront setting. In 1907 the fort became headquarters for the Coastal Artillery School, and stately brick and limestone administrative buildings were constructed south of the moat. Along Ingalls and Fenwick Roads, the distinctive officers' quarters were built. To this day the area retains its original village or campus-like quality which is reinforced by the lush canopy of tall shade trees. All the traditional elements of the village/campus are present: the main street, the church, the green, the theater, the headquarters (town hall) building and the post office. The growth of the zone over time in a variety of revival styles contributes to its interest, elegance, and perception of design excellence.



BATTERY PARROTT W.W.1

Along the shoreline north of the historic fort lay a series of massive coastal battery emplacements. The variations in their forms illustrate the developments in weaponry through the first half of this century. By the late 19th century, the defenses of Fort Monroe had been rendered obsolete by a new generation of naval weaponry. Along the shoreline massive gun emplacements of concrete and earth were constructed between 1891 and World War I. The impact of the emplacements to the shoreline and the nature of the construction provide both rich historical and visual qualities to the post.

Fort Monroe's place in history is assured by virtue of events of national significance which have taken place there. Based upon this historical and architectural significance, the entire installation has been designated a National Historic Landmark, and protected under the National Historic Preservation Act of 1966.



VIEW FROM RAMPARTS ca. 1910

Section 2

Visual Zones

Introduction

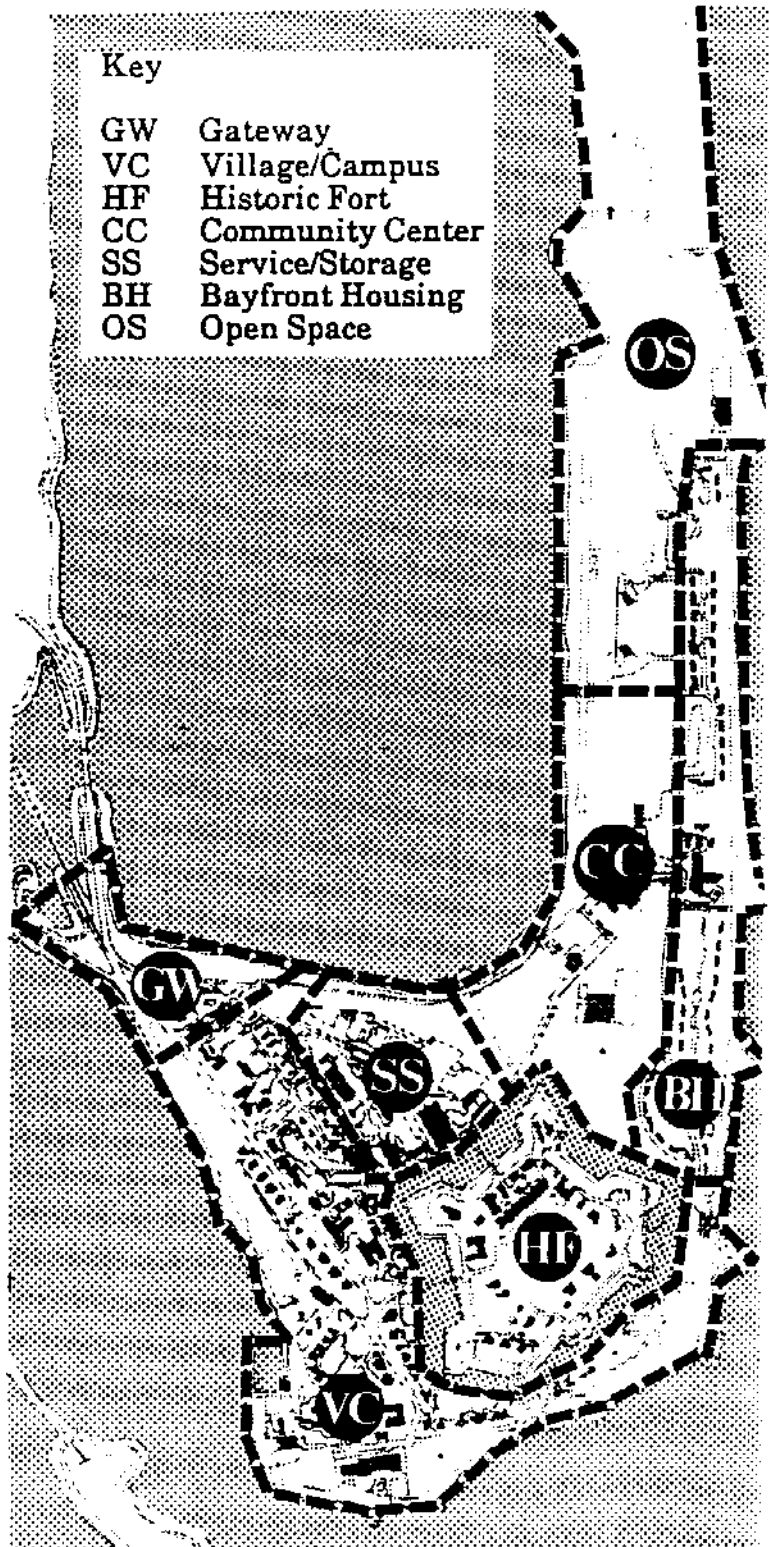
General Definition

Seven discernable visual zones have been identified for the organization of the Fort Monroe environment. Often a specific type of activity or land use is what distinguishes one zone from another; however, a visual zone encompasses an area larger than one single land use reservation and is defined by the positions of buildings, roadways and landscape elements. As a result, the land use subdivisions that occur within the reservation plan are not perceived as visual entities in reality. In these cases, to achieve a visual sense of orderliness, facility design must be coordinated for the entire visual zone. For this reason the design criteria of the IDG are presented according to their visual zone appropriateness. In the adjacent Visual Zone Map, the seven visual zones that encompass Fort Monroe are graphically defined.

The following pages describe the character of each visual zone, its assets and its liabilities. In addition, general design goals, objectives and recommendations are outlined for each zone. These goal statements form the basis for the specific design guidelines which follow.

The design guidelines and criteria that follow have been organized based upon broad design disciplines (i.e., 1. Site Planning, 2. Architecture, 3. Landscape, 4. Site Furnishings, 5. Lighting and Utilities, 6. Signage); their appropriateness is referenced for each visual zone.

GW VC HF CC SS BH OS



VISUAL ZONE MAP

Gateway Zone

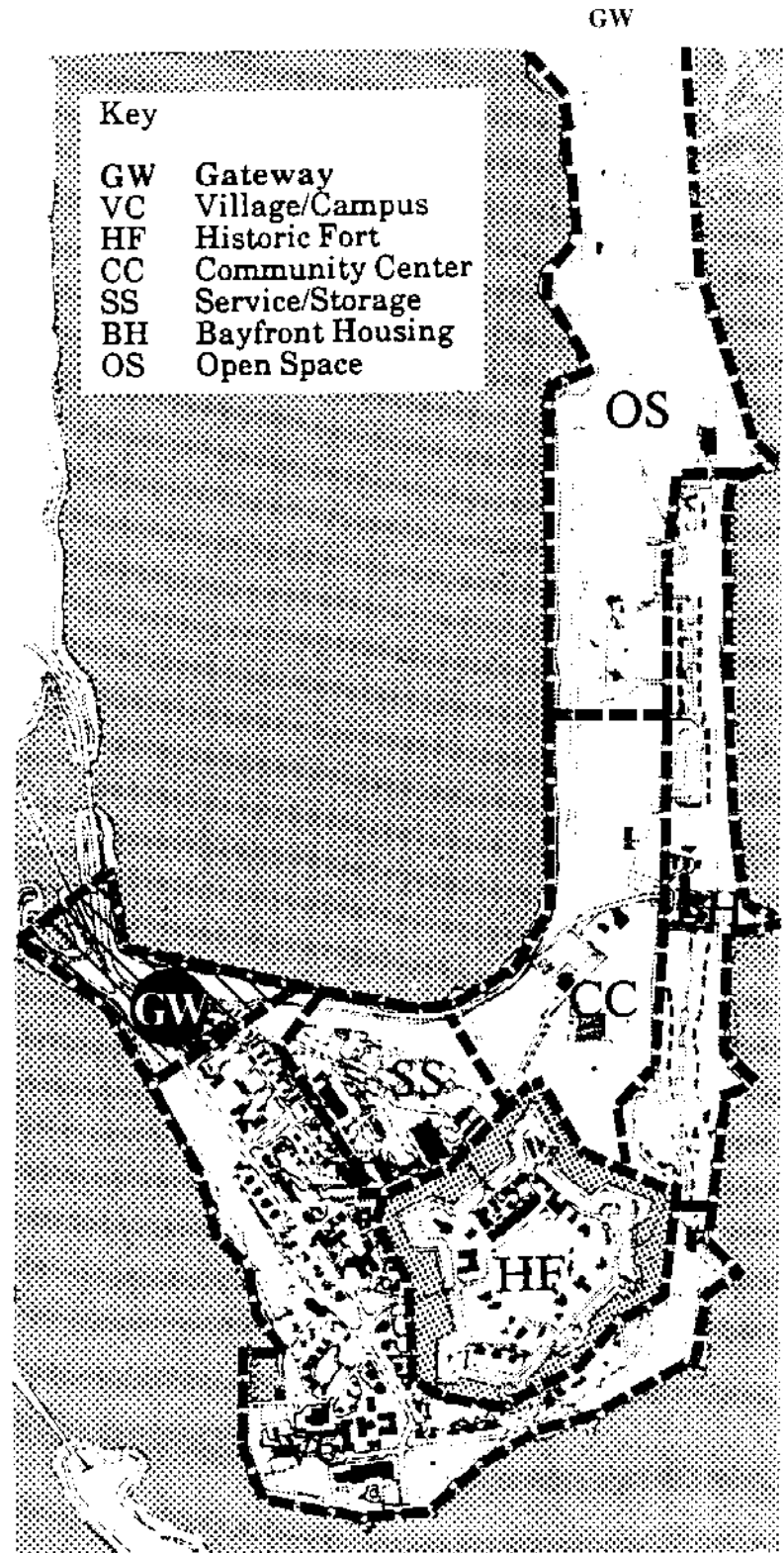
Zone Description

The Gateway Zone has its focus at the intersection of the dual causeway approaches crossing Mill Creek from Pheobus and the beginning of McNair Drive and Ingalls Road. Here the first impression of the installation is established. To the right lies the open water of the Hampton Roads, and to the left Mill Creek, reinforcing the impression of Fort Monroe as an island. One passes between formal brick piers and past carefully groomed lawns approaching the gatehouse. Ahead the roads diverge and present a choice: whether to continue along the water's edge toward the TRADOC Headquarters complex along McNair Drive, or to enter the campus-like environment off Ingalls Road, proceeding at a slower pace through a more enclosed space flanked by older buildings and shaded by mature trees.

The visual impression of the gateway area is generally a positive one. The views across the open water are exciting, and the image of the post as an island establishes a strong sense of identity. The condition and level of maintenance of the buildings and grounds is very high and express a sense of pride and caring. The single point of access for the entire post also establishes a strong sense-of-entry.

However, this positive image is somewhat weakened by a few visual liabilities. The configuration of the street intersection gives few visual clues to direct the driver to the appropriate route. Stilwell Drive is the primary route to and from the Combined Activity Center (CAC) and Bowling Center. McNair Drive is a wide waterside street and is one of the two primary access roads to the TRADOC Headquarters area. Ingalls Road, however, now functions as the more immediate entrance to the post.

VISUAL ZONE MAP



Gateway Zone

The goals of the design recommendations for this area are to adjust the street configuration to provide a strong orientation, clarify the access to Stilwell Drive, and enhance the significance of McNair Drive as the main approach to the headquarters complex. In addition, the sense-of-arrival and identity should be reinforced through enhancement of the signage and monuments.



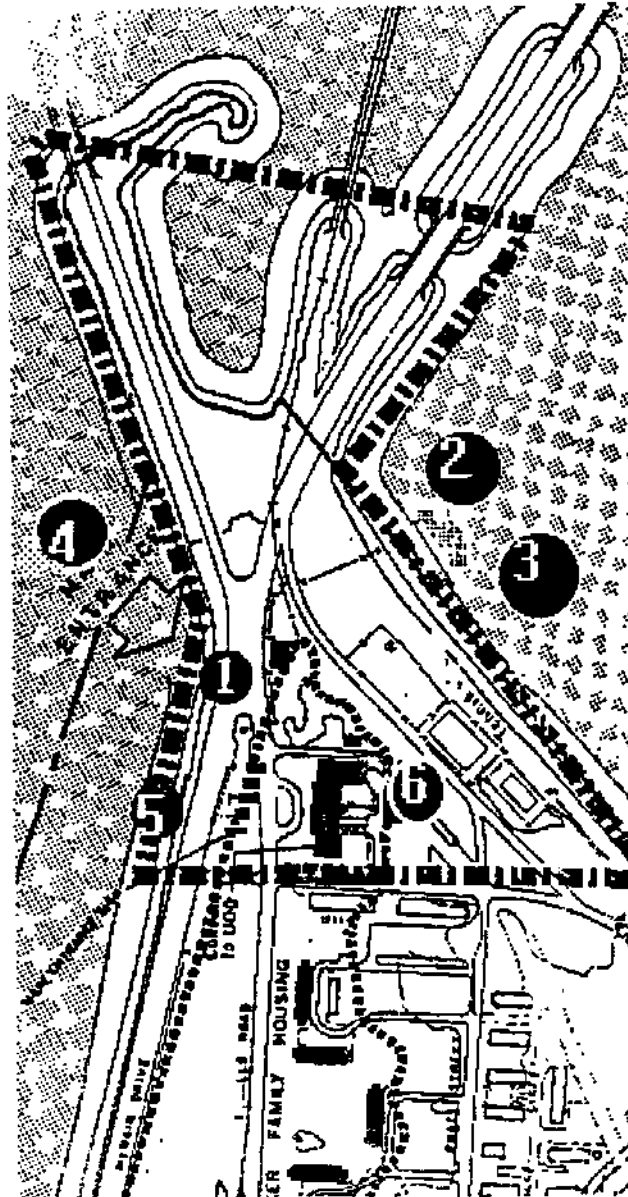
VIEW OF MAIN GATE

Gateway Zone

GW

Design Recommendations

1. Improve gateway intersection to help direct incoming traffic.
2. Continue program of relocating overhead utilities underground especially at gateway intersection.
3. Relocate recreational vehicle parking lot north of Stilwell Drive to Service and Support Zone.
4. Consolidate and reorganize signs approaching gate.
5. Add planting strip/pedestrian walkway along water's edge.
6. Reorganize and screen parking on the east side of Building 87.



PLAN OF GATEWAY ZONE

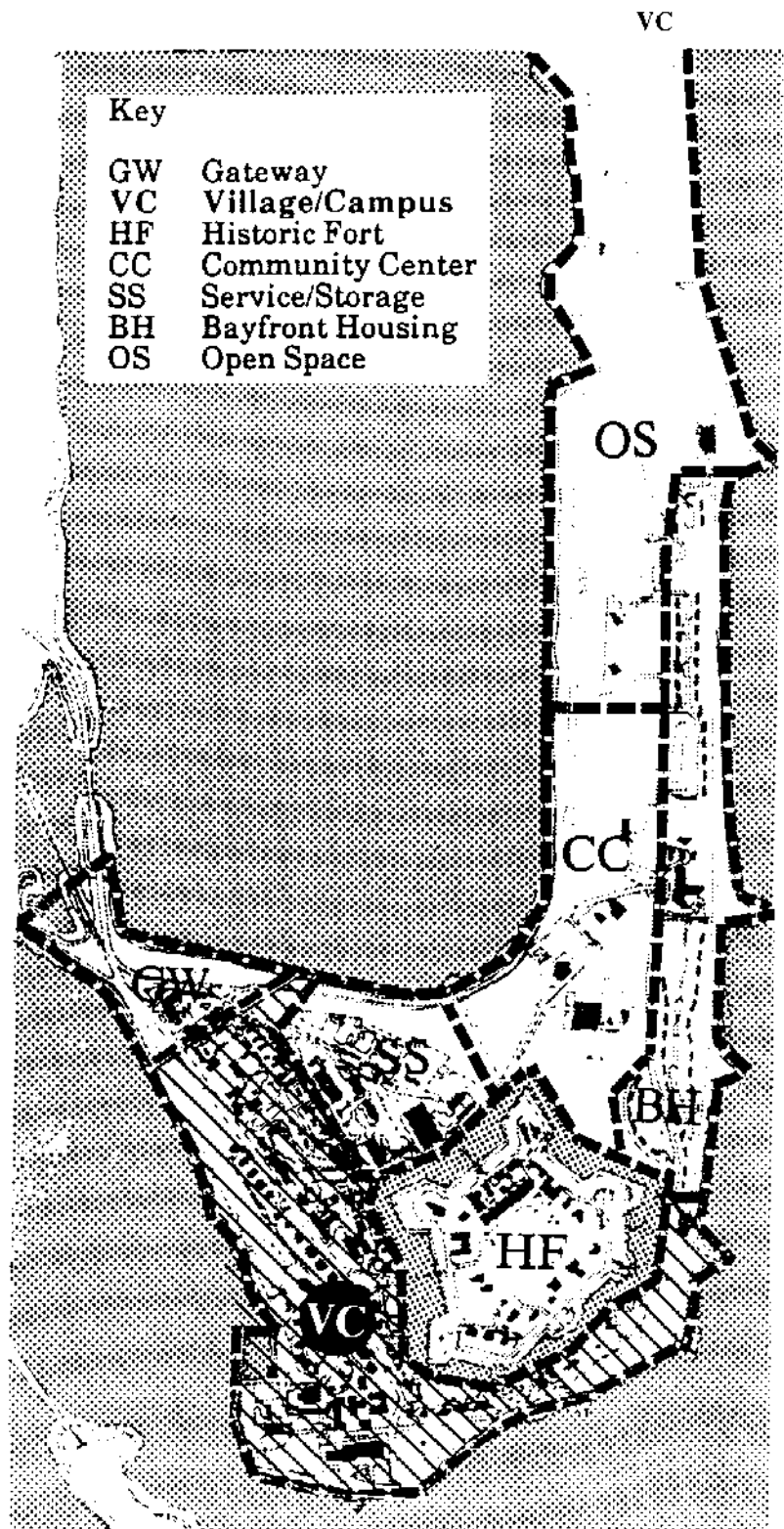
Village/Campus Zone

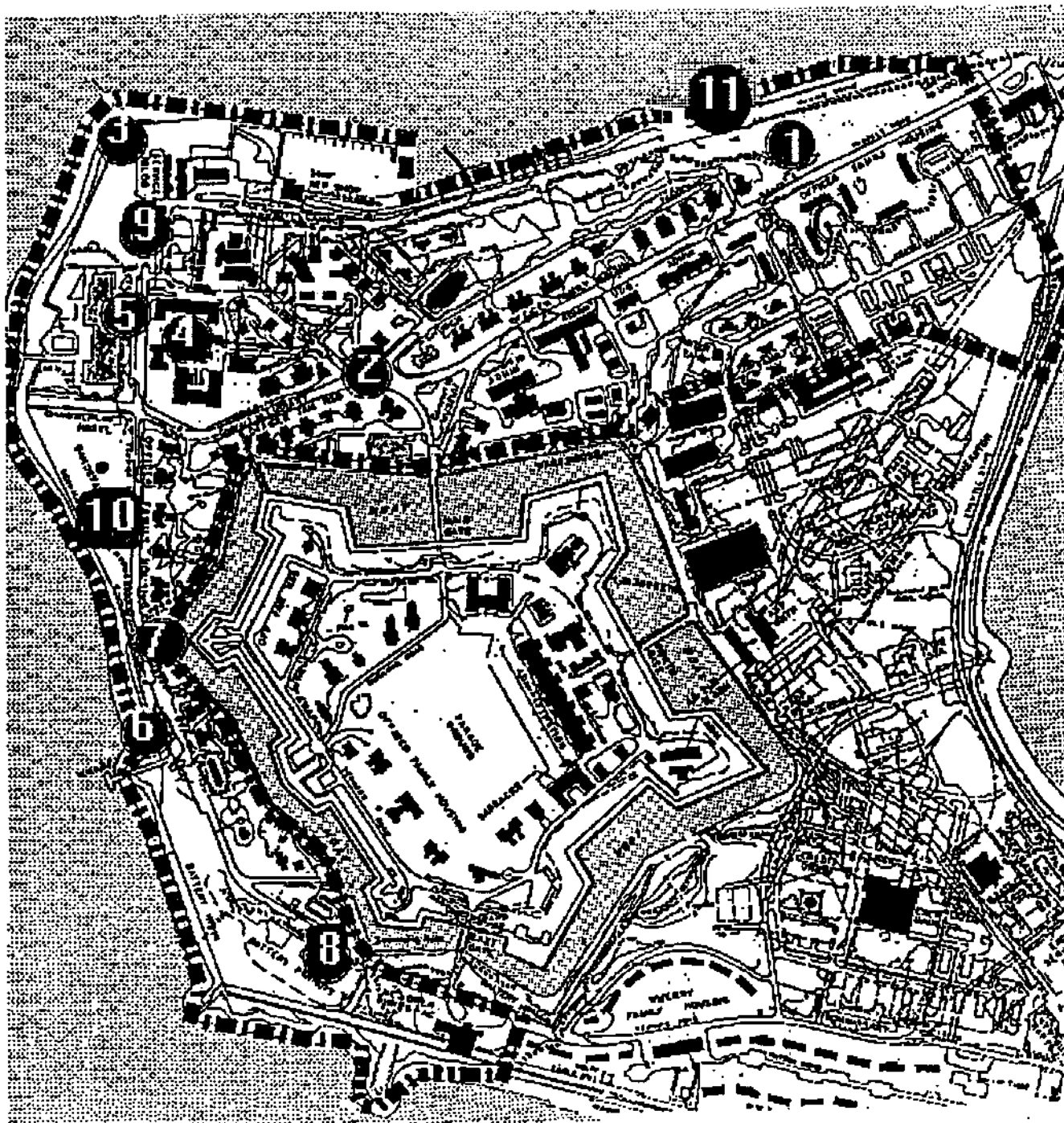
Zone Description

As one enters the Village/Campus Zone via Ingalls Road, the first impression is one of a small town with tree-lined streets flanked by the distinctive architecture of officers' residences. Presently Ingalls Road serves as the primary entrance route to the post and forms the spine of this picturesque and historical campus area. The red brick residential and administrative buildings vary in size and particular style, but form a visually cohesive whole due to a consistent design attitude toward their overall scale, siting, materials, colors, and architectural detail. The buildings generally respect a consistent setback distance from the street with a landscaped front yard. Porches provide another unifying feature to buildings of varying use and scale. The architectural style of the buildings vary, but share an emphasis on the neo-colonial or federalist style, with colonnaded porches, balustrades, cornices and pediments. The lasting impression of Ingalls Road and the Village/Campus Zone is of an orderly rhythm of stately homes, integrated with the distinctive architecture of administrative office buildings, sheltered under the canopy of mature trees, and related to a 2½ - 3½ story height.

The goal of the design recommendations for this area is to maintain its historical character and to successfully integrate future development into the existing character of the area.

VISUAL ZONE MAP





Village Campus Zone

Design Recommendations

1. Landscape and define open area between McNair and Ingalls Road.
2. Preserve and maintain the village/campus environment along Ingalls Road.
3. Upgrade the sidewalk and landscaping in the vicinity of Chamberlin Hotel entrance.
4. Add planting islands at Engineer's Pier to improve on-street perpendicular parking.
5. Upgrade visual appearance of Battery Parrot and relocate on-street parking to parking north side of Battery.
6. Upgrade circulation and visual appearance of parking areas.
7. Maintain high quality of Continental Park and surrounding buildings.
8. Upgrade pedestrian environment along seawall and provide planting/buffer strip.
9. Demolish World War II temporary buildings to create more open, green space and to allow for future construction if needed.

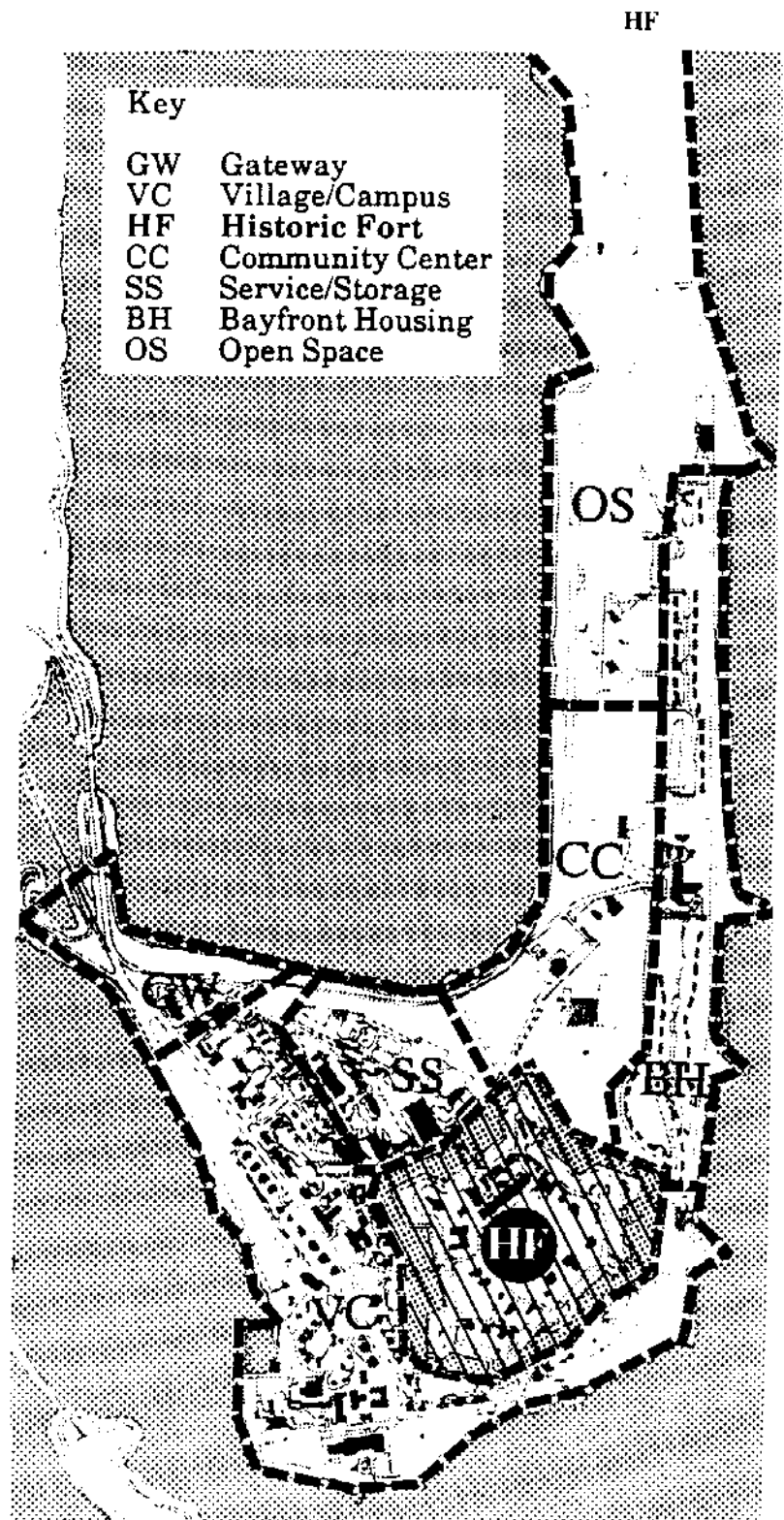
Historic Fort Zone

Zone Description

The Fort itself is a powerful determinant of the overall visual image of the post. Views of its massive stone walls topped by earthen berms and surrounded by the reflective water of the moat are revealed in various contexts and provide a continuous theme tying together the different visual zones that today surround the Fort. The exact configuration of the Fort is enigmatic the diagram of its plain view is less significant than the actual eye level glimpses one gets of corner bastions or picturesque views along a section of moat. These images are presented dramatically, as framed views between buildings, where an edge of the moat projects out to meet the roadway, or where a bridge crosses the moat at one of the Fort's gates. The significance of this image is in its expression of the military history of the site and its poignant juxtaposition with the current high-level administrative role of the post.

Entering the fort through one of the three gates is a visually powerful experience. The tunnel-like space is initiation into the special visual zone which is the symbolic/historic center of the post. Within the fortifications the image is of a quieter protected, cloistered space. Activity is slowed and cars move more carefully through tight spaces. The geometry is loosely organized by the encircling, roughly hexagonal enclosure of the earthen embankments. At the center lies the green plain of the parade ground, framed on the south by groves of live oaks and smaller scale historic quarters, and on the north by the less graceful facade of the larger barracks and administrative buildings. In spite of its continued use, this area retains a strong historical image associated with Fort Monroe's past role as a major defensive garrison.

VISUAL ZONE MAP



Historic Fort Zone

HF

There are, however, significant visual liabilities within the historic Fort. The introduction of the automobile to this 19th century environment has required Bernard Road to be widened, creating an appearance of crowding and congestion, especially at the larger administrative buildings. Grounds between buildings have become parking lots and lack any form of landscaping. The largest parking area abuts the largest administrative building, detracting from the quality of entrances to that building. The northern edge of the central parade ground seems barren because the mature trees that once stood there have been removed. Finally, the image of the gates has been compromised by the array of traffic signal equipment, white-washing of the masonry walls, and apparent conflicts between pedestrians and vehicular requirements.

The goals of the design recommendations for the Historic Fort are to enhance the unique historic character of the buildings and fortifications, lessen the negative visual impact of vehicular traffic and parking, and reinforce the park-like setting of the parade ground.



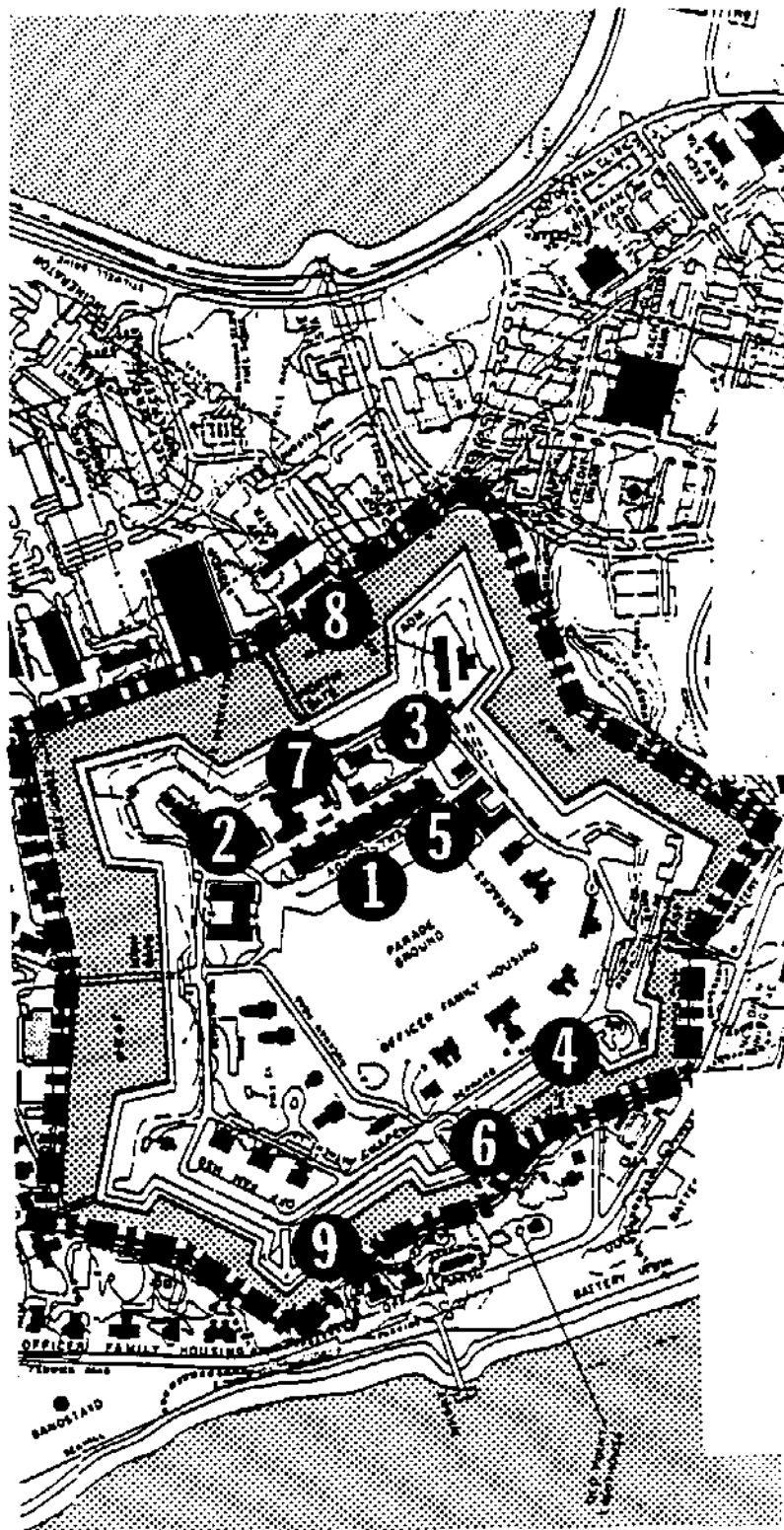
VIEW OF PARKING AT BLDG. NO. 5

Historic Fort Zone

Design Recommendations

1. Upgrade parking at Building No. 5 and provide low landscape screening between parking and parade ground.
2. Clarify the separation of parking areas from Bernard Road through the use of planting strips and reorganized access points.
3. Develop a new consolidated parking area as the temporary building is removed.
4. Upgrade visual appearance of Casemates.
5. Maintain and upgrade architectural character of buildings and historic trim elements.
6. Replace chainlink fence at Jefferson Davis Memorial with appropriate fencing material.
7. Limit number of parking spaces within moat. Institute a remote parking policy and improve pedestrian system at North Gate as a walkway to remote parking.
8. Improve pedestrian environment and fencing along perimeter of moat.
9. Develop an accent exterior lighting program to highlight historic bastion at night.

PLAN OF HISTORIC FORT ZONE



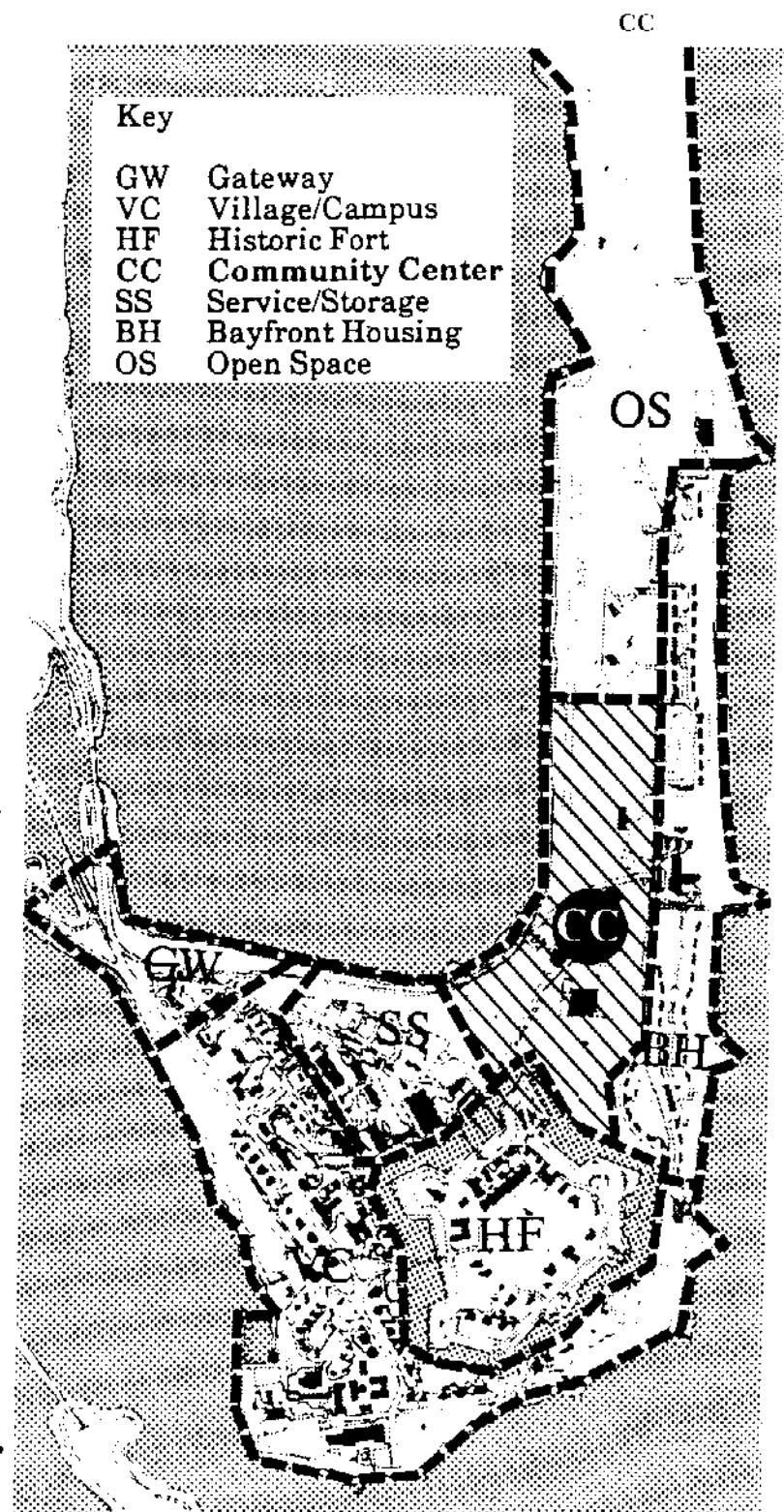
Community Center Zone

Zone Description

The Fort Monroe master plan envisions the majority of new future development and the concentration of all community service facilities in this zone north of the historic Fort. Presently this area appears as a mixture of roadways, parking areas, buildings and utility lines left from a previous pattern of development. The buildings that remain were generally built during World War II. The Post Exchange, Bowling Center, Child Development Center, and the new Community Activities Center represent the first steps in the total redevelopment of this zone. The existing visual liabilities in this zone are obvious and will change with the new development. However, the improved visual character which should be developed in the future must be clearly understood now, and carefully coordinated through a site development concept plan which encompasses the whole Community Services Center Zone. The lack of such a plan is this area's major liability. On the other hand, the concentration of future development in this area provides the opportunity to dramatically change its present image.

The goals of the design recommendations include the establishment of organizing principles for the coordination of siting for new facilities in this area. The circulation system in this area should provide clear orientation, and the pedestrian spaces should be coordinated to form a clearly organized network. A unified image can be achieved through coordination of architectural character, site furnishings, signage and other significant aspects of the visual environment.

VISUAL ZONE MAP

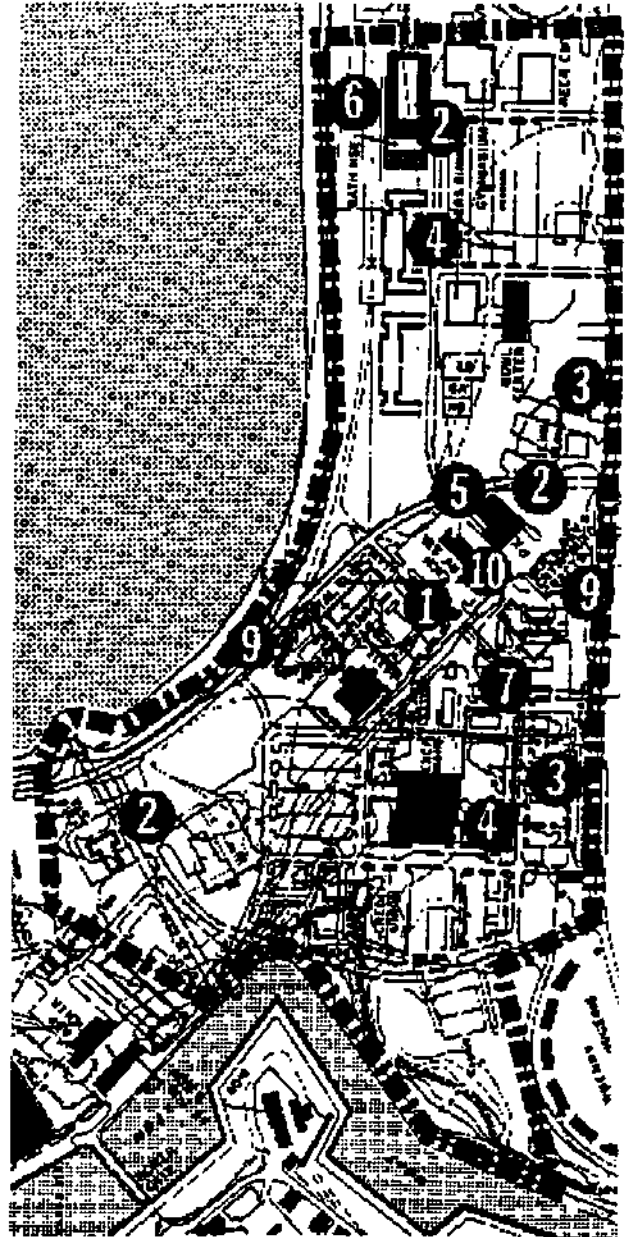


Community Center Zone

CC

Design Recommendations

1. Prepare a comprehensive development plan for the Community Center zone that will coordinate future buildings, roadways, parking areas and open spaces.
2. Carry out proposed roadway improvements and realignments:
3. Clarify distinction between thru roadway and parking areas by introducing planting strip, setback and curb.
4. New buildings in zone should utilize consistent materials and architectural character.
5. Street and parking lighting should be consistent with Lighting Design Criteria.
6. Provide pedestrian pathway at Mill Creek Edge.
7. Remove temporary WWII wood structures.
8. Develop street tree planting program along Fenwick Road and Stilwell Drive to reinforce the primacy of these roadways and visually define space.



PLAN OF COMMUNITY CENTER ZONE

Community Center Zone

CC

Design Recommendations

9. Upgrade the Building 165 area by introducing landscaping to buffer view from Stilwell Drive. Define this area through the introduction of curbs and planting.
10. Consolidate and improve the Joint War-fighting Center facilities.

Services/Storage Zone Zone Description

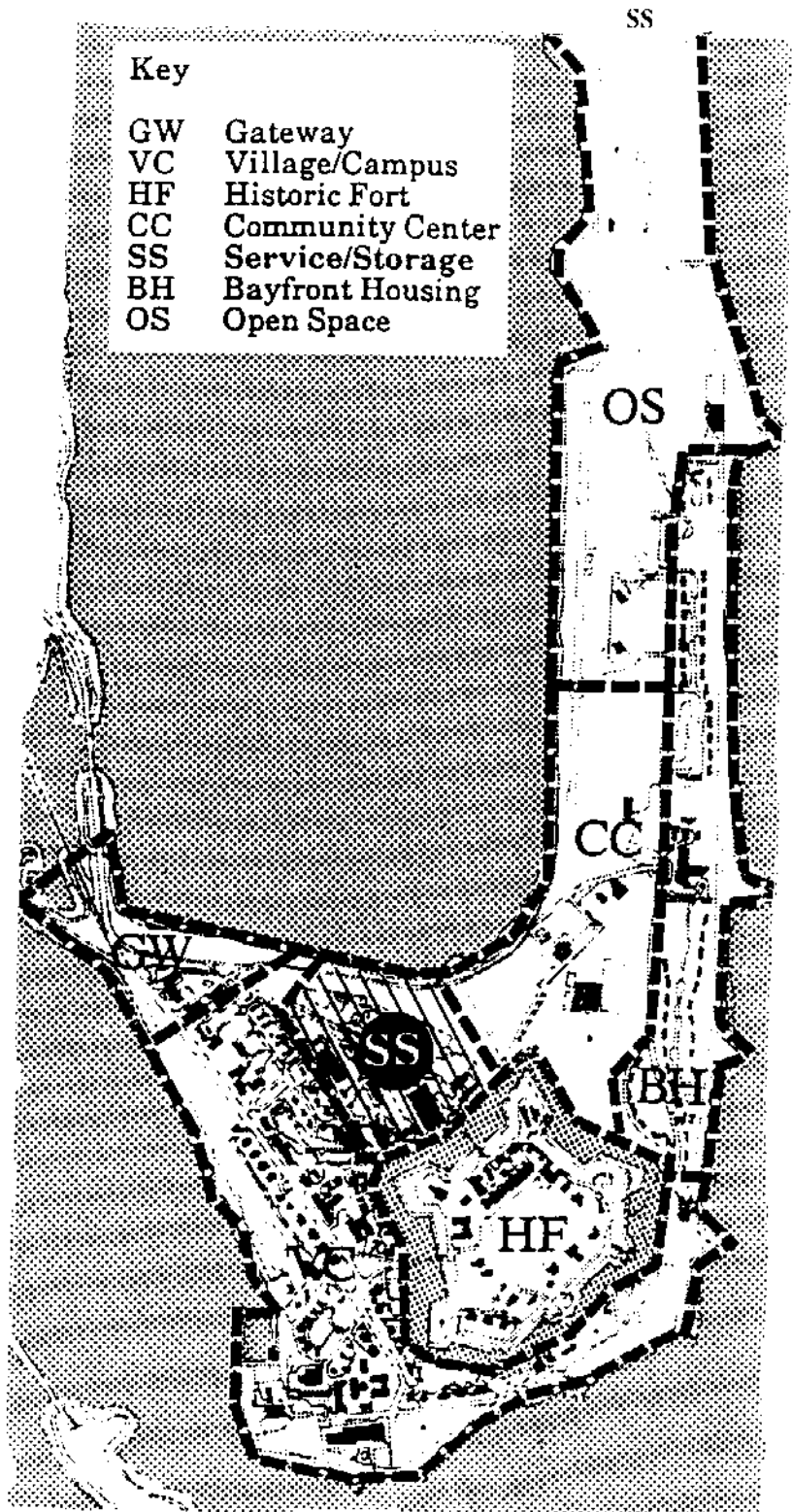
Virtually all the service and storage type functions of Fort Monroe are located in the Service and Support Zone northwest of the Historic Fort. This single land-use gives this area its particular image. Several brick buildings along Patch Road also give the area a distinctive appearance which is in keeping with adjacent brick housing and with the more historic brick structures of the post.

Because this area has developed in several phases responding to wartime mobilization, the general configuration of buildings and roadways appears arbitrary. Buildings along Patch Road are oriented to the edge of the moat, and are sited close to the moat restricting the width of the roadway.

Several WWII era wooden structures still remain in use along Pratt Street. Their poor state of maintenance detracts from the housing environment nearby. Stilwell Drive, in its capacity as the primary access road to the Post Exchange and Community Services Center, should be visually screened from unsightly storage yards and service buildings.

Goals for this area are to improve the image of the edges along Stilwell Drive, Patch Road and Pratt Street. In addition, the overall configuration of access drives, parking lots and storage yards should be reviewed to develop a cleared organization and circulation pattern. Whenever possible, service access or loading docks should be located away from main roads such as Patch Road.

VISUAL ZONE MAP

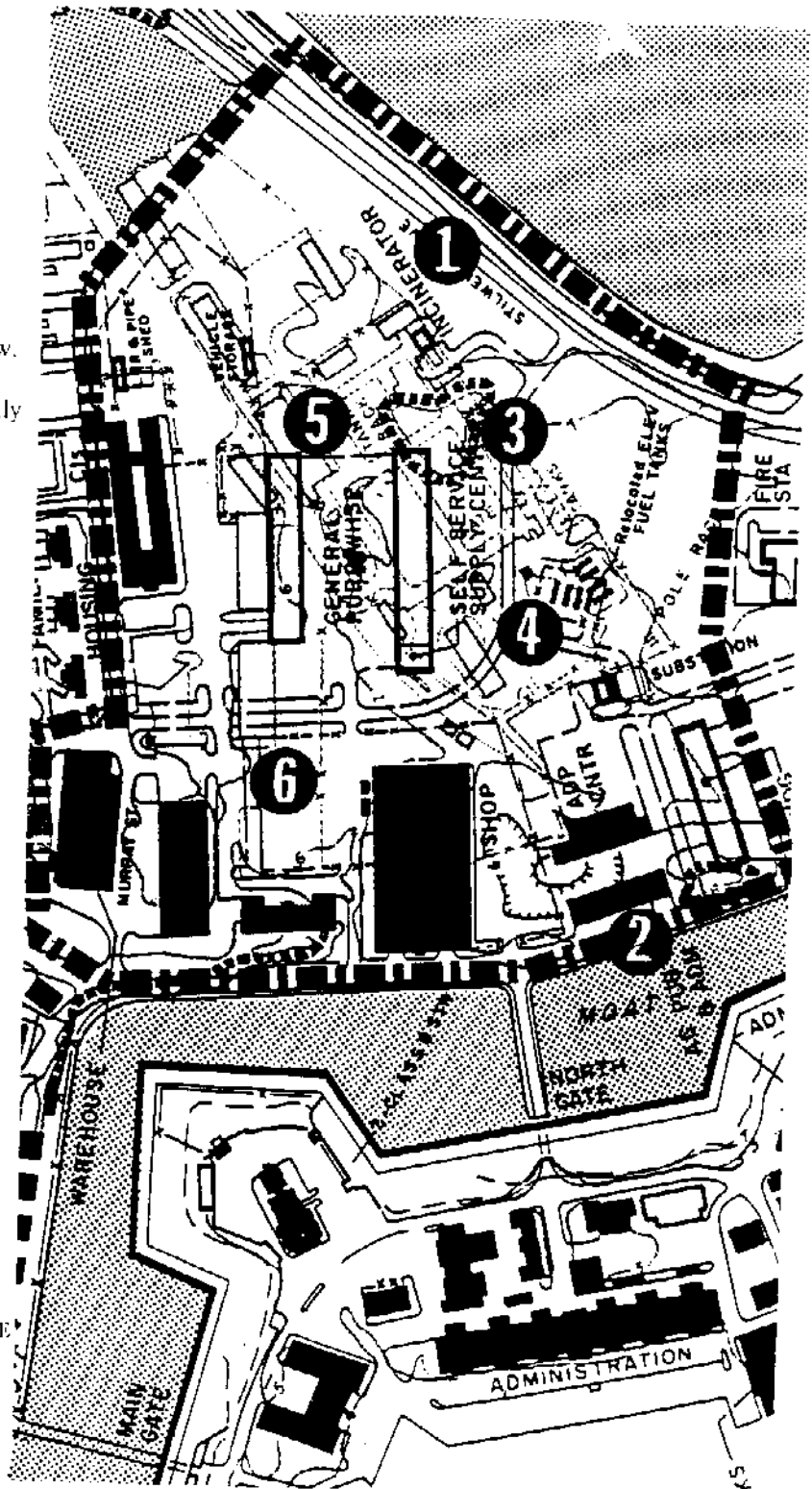


Service/Storage Zone

Design Recommendations

1. Maintain setback along Stilwell Drive and provide landscaped screening.
2. Create a clear circulation pattern with primary access from Stilwell Drive.
3. Consolidate storage yards and screen from view.
4. Orient and site new buildings to screen unsightly views, including the new warehouse.
5. Upgrade parking areas.

PLAN OF SERVICE/STORAGE ZONE



Bayfront Housing Zone

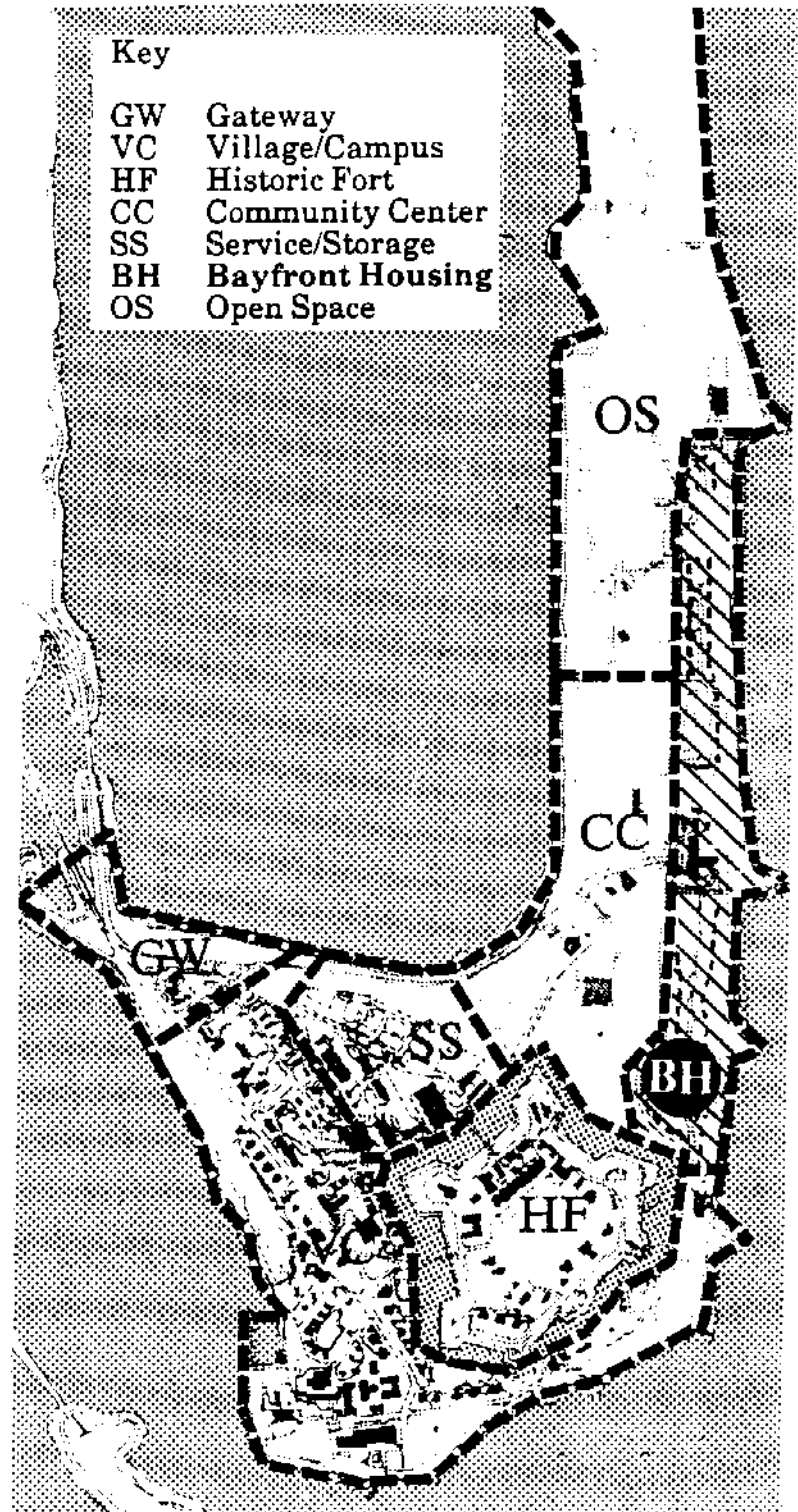
BH

Zone Description

The Bayfront Housing Zone stretches along the bayfront seawall from the historic Fort to the Monroe Club. The aesthetic condition of the buildings is generally average to poor, partially due to the bayfront exposure. The grounds are sparsely planted, and the parking areas and personal storage sheds have a somewhat haphazard appearance. In spite of these visual liabilities, the waterfront location and adjacent recreation areas offer some positive amenities. The massive remains of the coastal batteries are historically significant and an important aspect of the installation's image.

The goals of the design recommendations for this area include the improvement of the housing quality and enhancement of the historical image of the coastal batteries. Materials chosen for housing renovations should be tolerant to salt spray. Landscape treatment should utilize native plant material which can survive within the special conditions here. Parking areas should be clearly defined and incorporate areas for tree planting. Utilities should be placed below ground where feasible. Personal storage facilities should be carefully located. Dumpsters should be carefully located and screened from view.

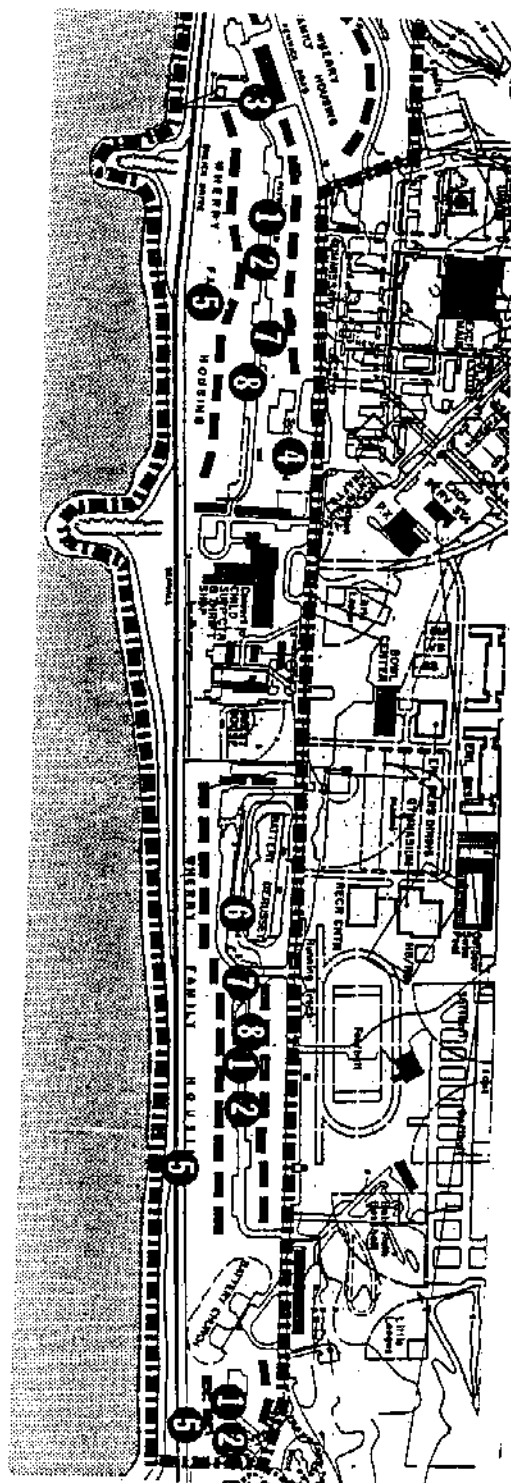
VISUAL ZONE MAP



Bayfront Housing Zone

Design Recommendations

1. Upgrade open space between residential buildings including landscaping, lighting, and parking.
2. Encourage the company owning the Wherry Housing buildings to articulate, individualize and upgrade the visual appearance of housing units.
3. Screen and separate non-residential uses within residential zone.
4. Install street curbs where missing around housing blocks and in parking areas.
5. Provide planting treatment at edge of seawall.
6. Improve visual appearance of Battery Derussey by partially restoring sand berm with soil stabilization planting.
7. Wherever possible place utilities underground.
8. Remove and reorganize storage sheds and clothes drying lines.



BH

Open Space and Recreation Zone

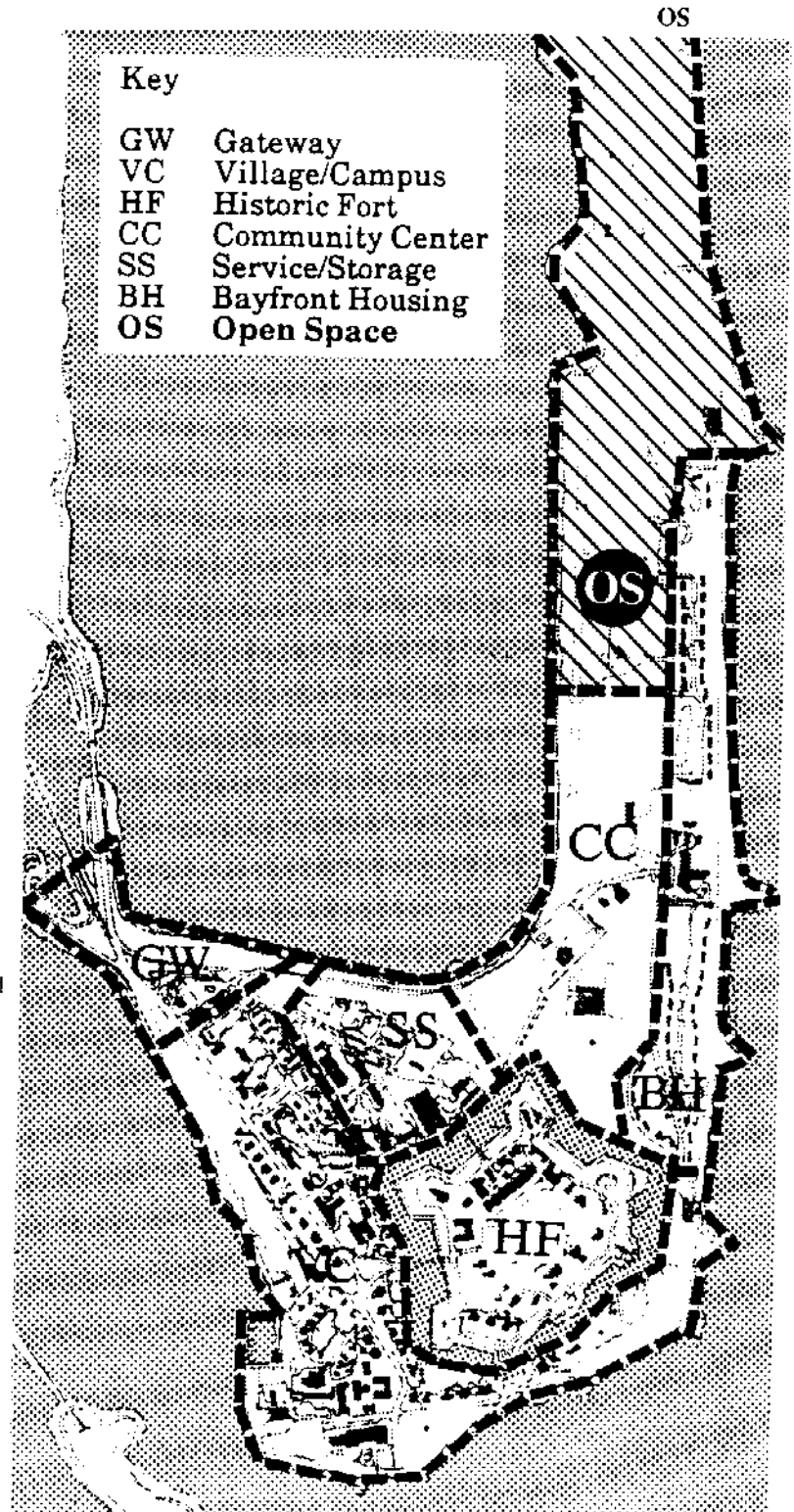
Zone Description

Fort Monroe enjoys a variety of open space, much of which is used for active recreation. From Battery Derussey north, the narrow neck of land is nearly entirely open, providing excellent sites for athletic fields, tennis courts, picnic areas and swimming beaches. This area's most important asset is its natural vegetation. The groves of live oaks and single stand of Loblolly pines are especially valuable for the shade they provide in summer months and for the visual definition they create.

The huge concrete coastal batteries represent a historical asset. The seawall promenade should be considered part of the overall open space system as it extends from Continental Park to the northern reaches of the sand spit. It is an important recreational asset because it provides a nearly continuous pedestrian pathway the entire length of the bay front.

Goals for the open space and recreation areas include preserving and maintaining the natural beauty of the landscape, trees, estuarine vegetation and water's edge. In addition the appearance of parking areas should be improved. Proper accommodations for runners and pedestrians should be provided along the seawall edge and around "detour" points. A return route, forming a running "loop", should be developed as part of an overall installation pedestrian system. Finally, the original graceful profile of the coastal batteries should be partially restored through landscape treatment around the base of their concrete retaining walls.

VISUAL ZONE MAP

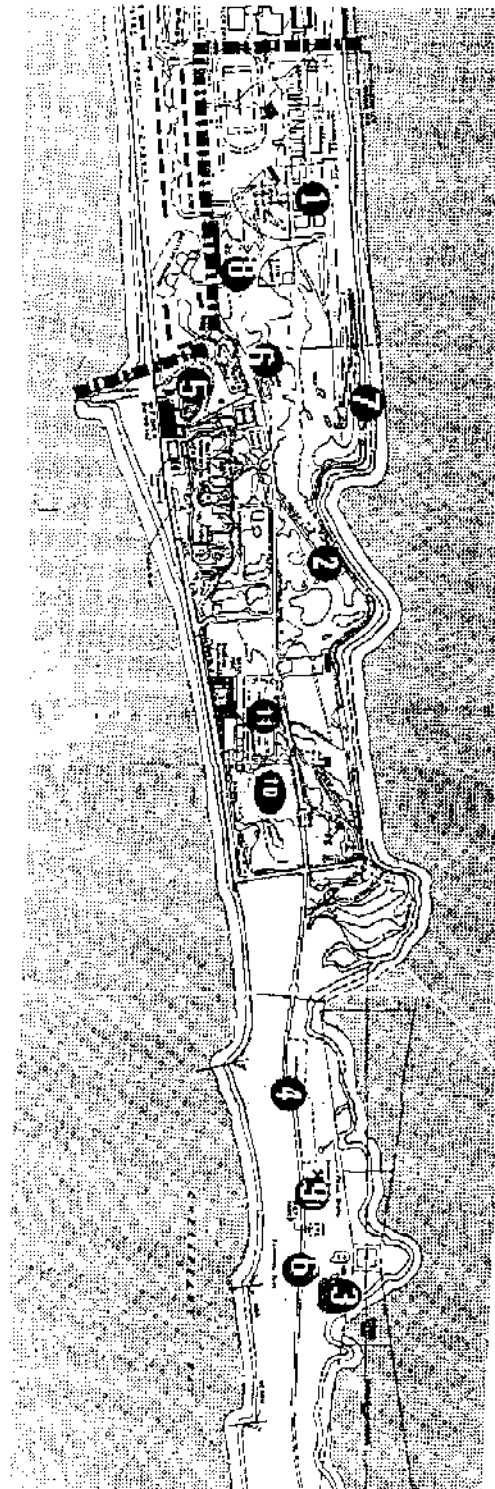


Open Space Zone

OS

Design Recommendations

1. Remove abandoned airstrip paving and develop an office park. Provide clustered plantings of live oaks between parking for areas of shade.
2. Provide off-street parking near Fuller Lane and relocate dumpsters to a discreet area accessed from this parking area and screened with landscaping. Locate toilet facilities discreetly near this parking area and screened with plantings, earth berms and wooden fencing.
3. Clearly define the perimeter and layout of the Dog Beach parking area, separating it from Fenwick Road.
4. Provide landscape improvements along the roadway leading from the proposed new helipad through the Dog Beach area. Use indigenous plant materials to help screen the Spotting Tower at Dog Beach.
5. Provide landscaped islands within the existing Fort Monroe Club parking area, its perimeter along the seawall and adjacent to family housing. Reorganize the layout of parking stalls to improve circulation. Provide a running path through the parking lot linking the seawall promenade to the running path along Fenwick Road leading to Dog Beach.
6. Remove on-street spaces on Fuller Lane.

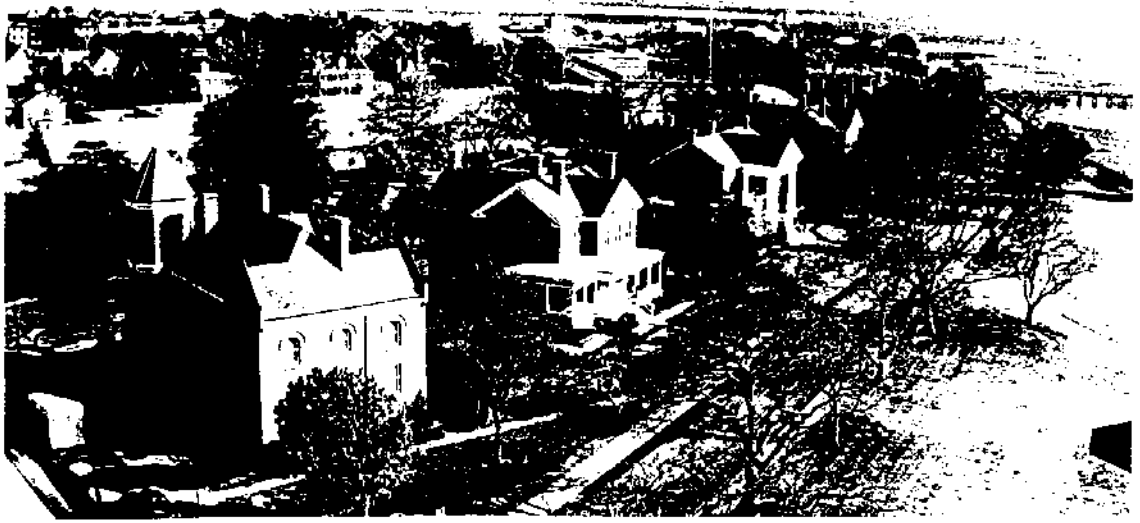


Open Space Zone

OS

Design Recommendations

7. Develop a continuous running path at the top of the existing earthwork along the Mill Creek edge connecting this pathway to the track along Fenwick Road leading to Dog Beach.
8. Make improvements to the parking and driveways at Building No. 206 and use plantings to screen the building and parking area from Fenwick Road and adjacent recreation areas.
9. Improve screening of showers, toilets and dumpsters at Dog Beach with wooden fencing and plantings of indigenous species. Locate dumpsters discreetly at back of parking area, away from showers and toilets.
10. Limit grass-mowing in areas which are not regularly used for a specific recreational (or other) activity. Seed with indigenous grasses and maintain in a more natural state.
11. Develop site plan and construct the Executive Office Park with proper circulation, parking and infrastructure.



Section 3

Design Criteria

Section 3-1

Site Planning

Site Planning

GW VC HF SS CC BH OS

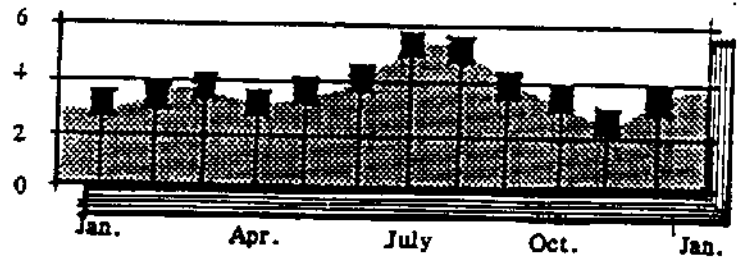
Design for Climatic Conditions

General Notes

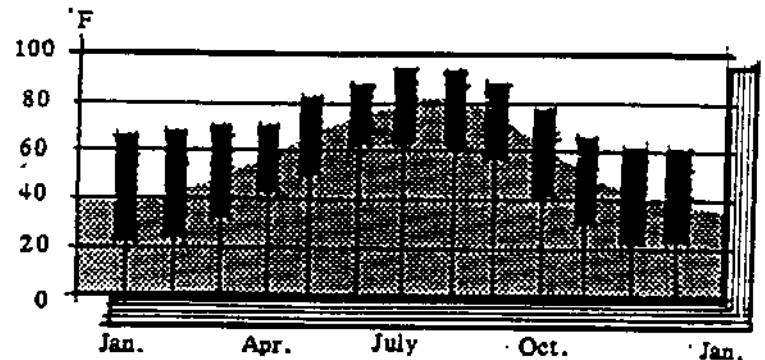
The climate in the Fort Monroe area is moderate. Average temperatures range from 70-87° F in July to 32-49° F in January with an annual average temperature around 60° F. The fairly evenly distributed rainfall averages about 42" per year. Prevailing winds arrive from the south in the spring and summer and change to northeasterly during late fall and winter. Occasional storms of hurricane force threaten the low lying coastal area.

In the past the post has been flooded by high waters caused by hurricanes. The installation is now protected from all but the most severe storms in the Chesapeake Bay by the seawall. However, excessively high tides associated with coastal storms will occasionally cause flooding of low ground areas. The visual impact of both the massive seawall edge and the elevated entrances to all buildings is a constant reminder of the fragile relationship of the sand spit to the bay.

The seasonal variation in climate is accentuated by the fort's location at the tip of the Virginia lower peninsula. At the height of summer, the intensity of the sun beating down on the narrow straight of sand creates a harsh outdoor environment with relief provided only by shade trees or by porches and canopies where they exist. However, in the winter months, it becomes a more bleak landscape, exposed to the winds and weather which sweep across the large expanse of gray sea surrounding the point.

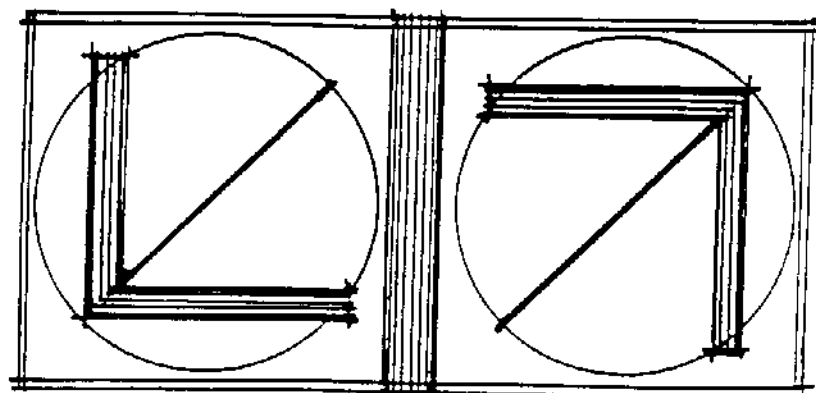


PRECIPITATION (INCHES/MONTH, MEAN.)
AVERAGE ANNUAL RAINFALL - 45.25 INCHES (MEAN)



TEMPERATURE RANGE DEGREES F.

PREVAILING WINDS



WINTER

SUMMER

□ AR □ LA □ CE □ ME □ EE □ MT

Design for Climatic Conditions

The climate is such that a more important determinate on the site is the microclimate. Located on the sand spit and surrounded on virtually all sides by water, the local air currents carry salt spray over the narrow land form. This affects both the natural environment with its detrimental effect on vegetation through 'salt burn', and the aging and decomposition of building materials. Human activity is affected by the constant buffeting and gusting of winds.

The flat topography of the sand spit affords little protection from the summer sun. Shade provided by the canopy trees along Ingalls Road, as well as the groves of live oaks on the historic parade ground or at the picnic/recreation areas is extremely valuable. These shade trees must be preserved and new trees planted where appropriate to continue to provide areas of shade throughout the post. The intensity of the summer sun is magnified outside the campus and fort areas by the wide expanse of hard reflective surfaces of concrete and asphalt along the sea wall and in parking areas and roadways. In winter the loss of leaves from the deciduous trees opens up view to the water and allows penetration of natural light from the low sun into habitable rooms.

Recommendations

Design of facilities at Fort Monroe must be responsive to these climatic conditions. Buildings should be elevated above the flood level, while maintaining convenient and attractive access to entrances from pedestrian areas at ground level. Design of building entrances and pedestrian areas should offer some protection from summer sun and winter winds.

Building materials should be carefully selected to minimize glare; provide rich warm tones and

GW HF VC CC SS BH OS

textures; and be compatible with the salt-spray environment, especially when located near the bayfront seawall.

The following recommendations are to be followed in the siting and design of new facilities, landscaping, roadways and parking. The recommendations describe general design responses to climatic conditions for specific situations.

Winds and Precipitation

Promote natural ventilation in spring, summer and fall. Use prevailing wind data to predict how breezes can be channeled by building design and landscaping.

Protect courtyards and residential areas from winter winds by planting or building forms.

Provide protection from rain at building entrances. Seasonal data indicates cold wind-driven rain from the northeast in winter. Summer storms usually blow from the north-east or southeast and occasionally from the northwest.

Hurricanes occasionally bring damaging high winds from the south, southeast, or east. Designer's selections for plant materials, site furnishings and building components must be made to withstand these extraordinary winds, especially near the water's edge.

Provide protection from rain at building entrances. Provide positive drainage to minimize freezing rain along pedestrian walkways and roadways.

In areas near the water's edge, wind-driven salt-spray is a critical factor in planting and building material selections. Anodized aluminum, for example, should be avoided.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

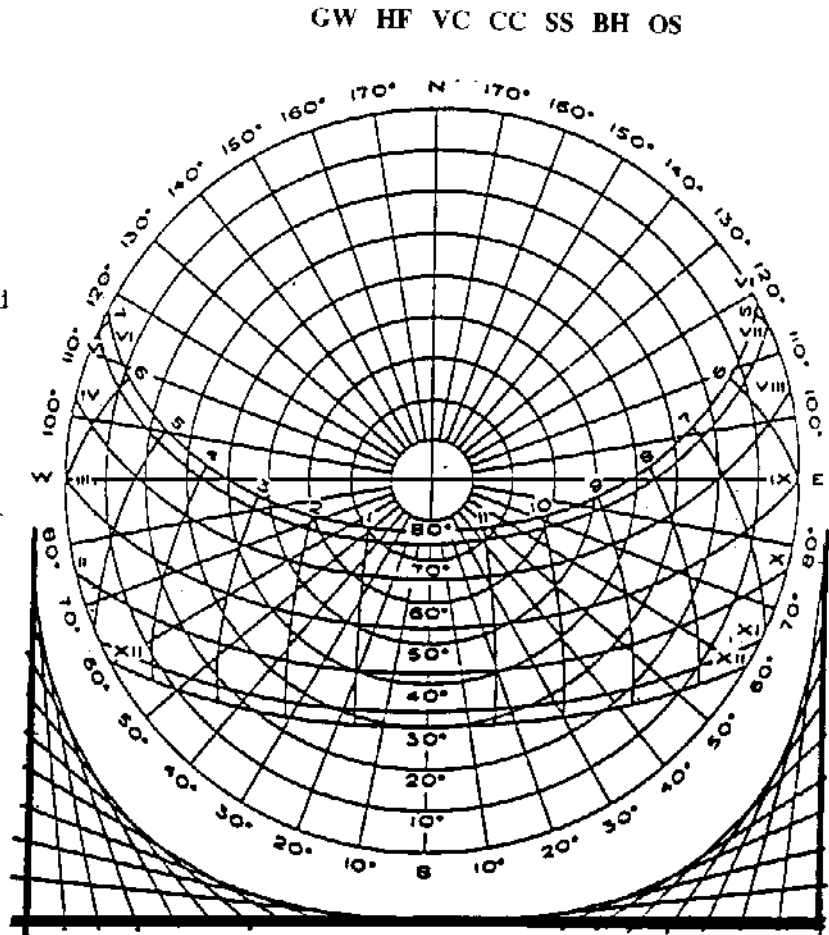
Temperature Range

Promote natural ventilation through operable windows or economy cycles for HVAC systems in spring and fall. See TM 5-785 for engineering heating/cooling requirements.

Solar: Latitude 37°0'

Heat gain through walls and glazed openings should be minimized in summer, but where possible promoted in winter. Take advantage of seasonal changes in altitude of the sun to achieve this in the design of window openings.

Provide shading from hot summer sun by planting large deciduous trees on the south and west sides of buildings and pedestrian areas. Use the solar angle data to predict the extent of the shading.



SOLAR PATH DIAGRAM FOR 37° LATITUDE
SOURCE: VICTOR OLCYAY, DESIGN WITH CLIMATES

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

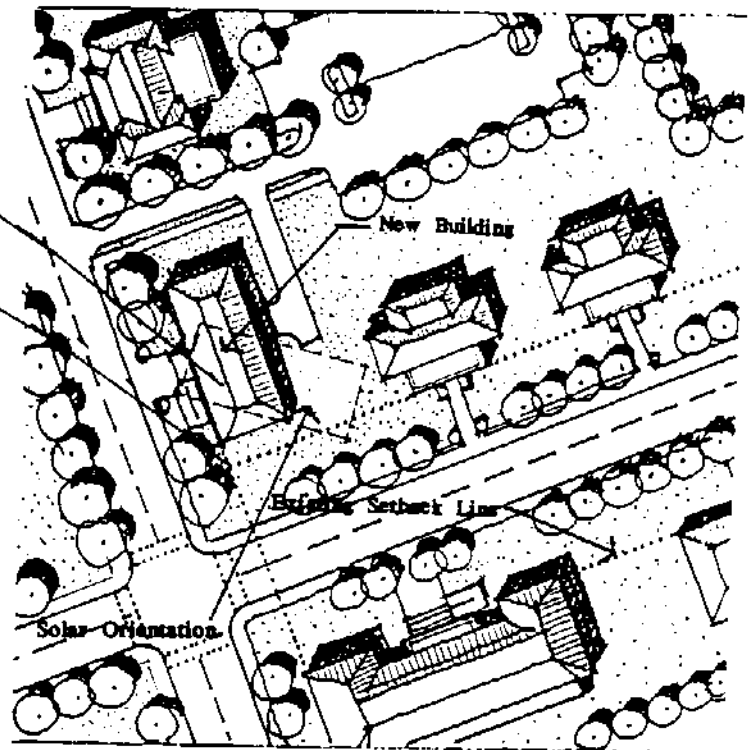
Building Orientation/Siting

GW VC HF BF CC SS OS

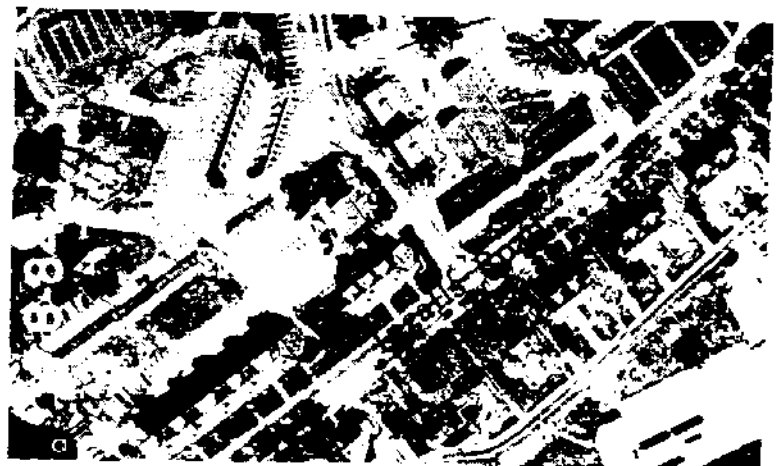
General Notes

- * Orientation of buildings parallel to street should take precedence over irregular solar orientation in siting.
- * Set back the building so that its facade plane is aligned with other buildings on the same street.
- * Where more than one street grid pattern exists, choose the most important frontage to orient the building.
- * Spaces between buildings will be regularly shaped rectangles, which are therefore more useful for parking and service areas.

Note: DoD regulations require all new buildings to be oriented with the broad side within 15° to 20° of due east-west. In general, this may lead to energy savings in buildings with certain proportions. However, in many circumstances, specific analysis of the actual design may indicate site development inefficiencies resulting from the awkward orientation where prevailing street grids and existing adjacent buildings are oriented otherwise. Moreover, other measures may be taken in the specific building design to optimize energy efficiency, such as shading devices at window openings, coordination of deciduous tree plantings, and certain types of skylighting. If solar orientation will not significantly affect the particular building, then it should be oriented squarely with the street or existing building grid.



SOLAR ORIENTATION CAN CAUSE DESIGN INEFFICIENCIES IN EXISTING BUILT-UP AREAS WITH STRONG ORTHOGONAL STREET GRIDS.



ORIENTATION OF BUILDINGS TO THE STREET HAS BEEN THE TRADITION AT FORT MONROE.

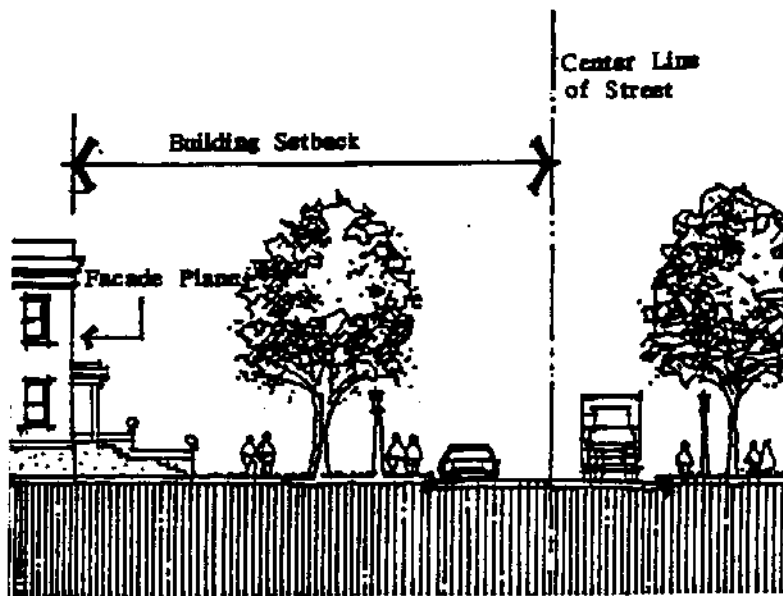
Building Setbacks

GW VC HF BH CC SS OS

Minimum Required Building Setbacks

Any new building or addition is to be located so that its facade plane is set back from the street centerline the following minimum distances. In existing built-up areas the setback requirement is intended to reflect the prevailing existing setbacks. In general, new buildings in these areas should be aligned with adjacent existing permanent structures. Follow this procedure:

1. Check the minimum setback required.
2. Compare with existing permanent adjacent buildings on both sides.
3. If there is a significant difference, and if the existing buildings are to remain then conform to existing condition after verifying with the DPW.

**Minimum Required Building Setbacks**

McNair Drive	
Main gate to TRADOC-HQ	min. <u>50</u> ft.
Ingalls Road	
Entire length	min. <u>50</u> ft.
Fenwick Road	
McNair to Battery Parrott	min. <u>40</u> ft. or align with existing
Fenwick Road	
North of Battery Parrott	min. <u>50</u> ft.
Stilwell Drive	
Main Gate to Community Service Zone	min. <u>100</u> ft.
Stilwell Drive	
Within Community Service Zone	min. <u>50</u> ft.
Bernard Road	
Entire length	min. <u>40</u> ft. or align with existing

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Roadway System Hierarchy

GW VC HF CC SS BH OS

General Notes

The roadway system on the post represents the primary organizing structure for site planning and new development.

The importance of each road determines the appropriate design criteria. Primary roads are highly visible and heavily traveled. Secondary Roads carry lighter volumes of traffic. Tertiary roads are not intended for public access and therefore carry the least volume of traffic.

Building Setbacks

See page 1-3-5

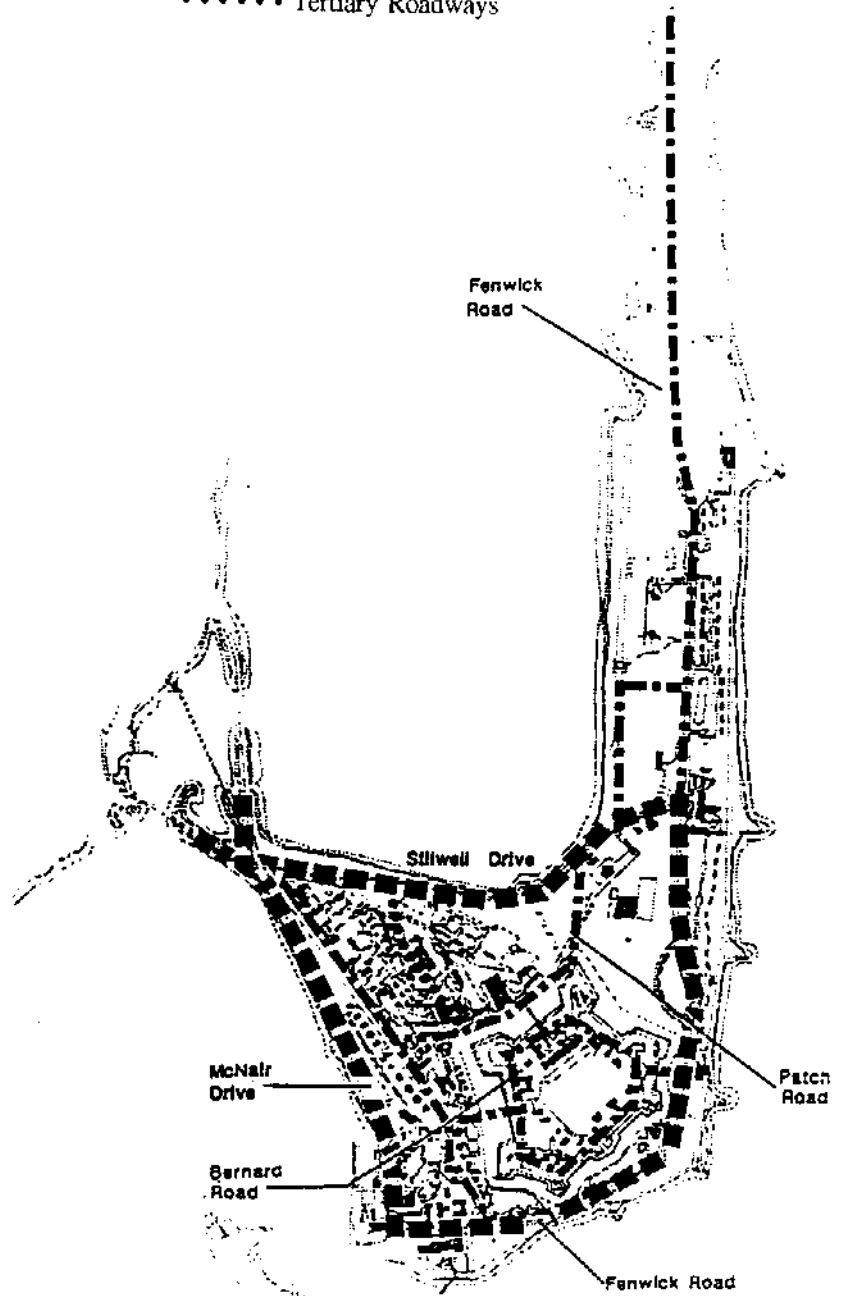
Lighting

Section 3-5

Reference: General Road and Roadway Plan (FM 189-1.4)

Key

- ■ ■ ■ Primary Roadways
- ■ ■ ■ Secondary Roadways
- Tertiary Roadways



□ AR □ LA □ CE □ ME □ EE □ MT

Pedestrian Pathway System

GW VC HF CC SS BH OS

General Notes

Pedestrian pathways are to be designed according to one of three guidelines, depending upon location. The three pathway types are:

Key

- ■ ■ ■ ■ Seawall Edge
- - - Sidewalks
- Mill Pond Edge/Running Path

1. Street Sidewalk

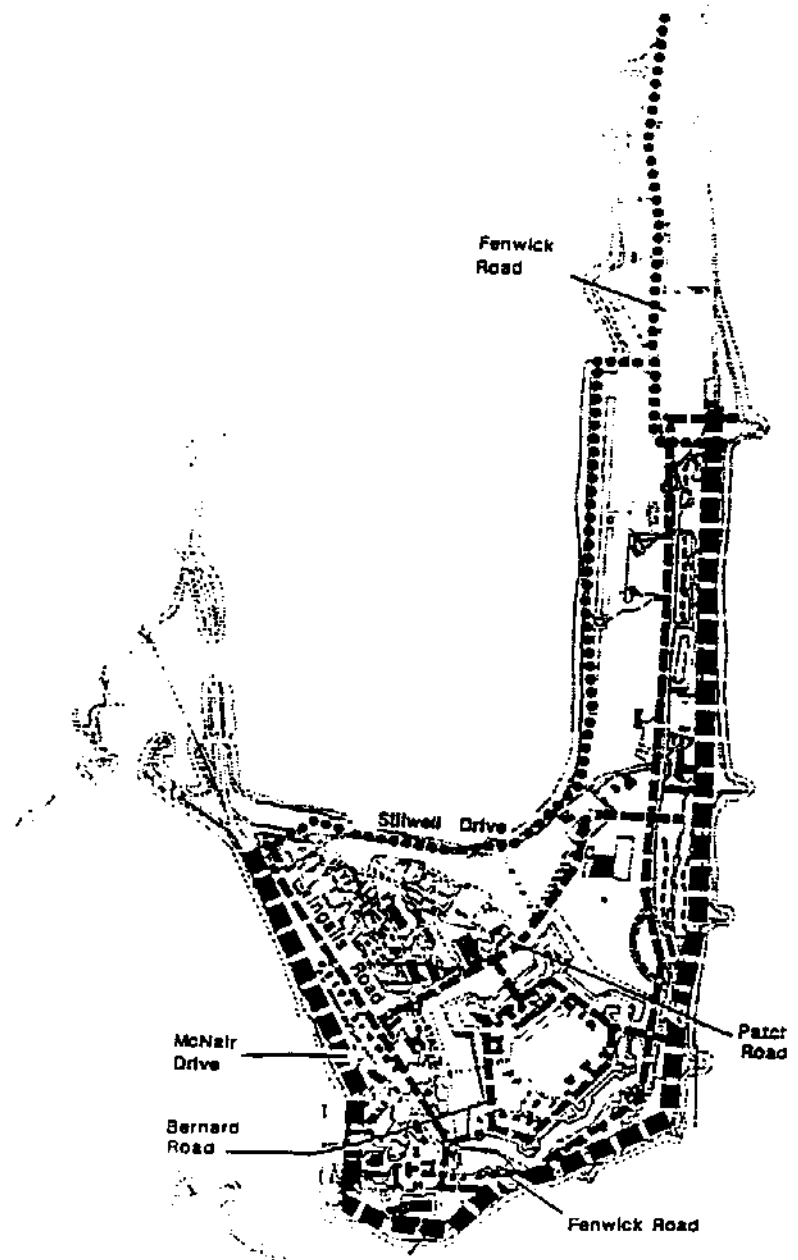
Adjacent to Ingalls Road, Bernard Road, much of Fenwick Road, and McNair Boulevard. Sidewalks are to be continuous with consistent relationship to street curb. See page 3-1-8.

2. Waterfront Walkway

Extending the full length of the seawall along the Chesapeake Bay and Hampton Roads edges of the Post. See page 3-1-9.

3. Mill Pond Edge/Running Path

A bituminous paved path connecting the Seawall Edge and completing a circuit around the entire post. This path is intended to support physical training activity. See page 3-1-10.



□ AR □ LA □ CE □ ME □ EE □ MT

Pedestrian Pathways - Cross Sections

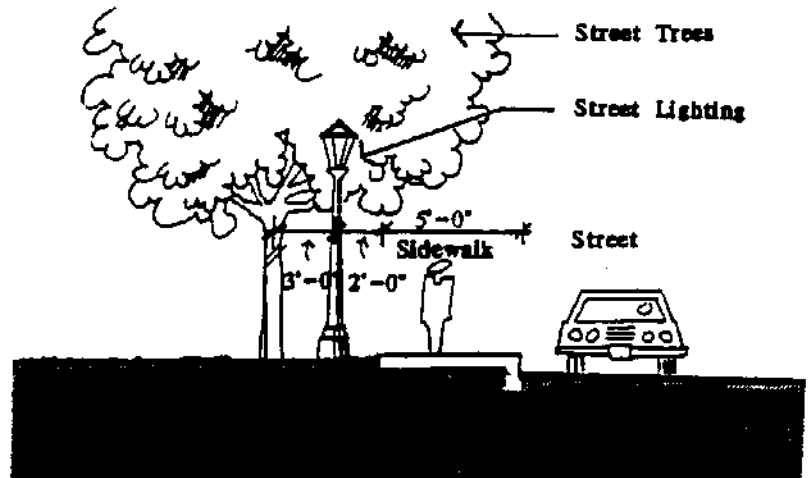
GW VC HF CC BH SS

1. Sidewalks Adjacent to Street

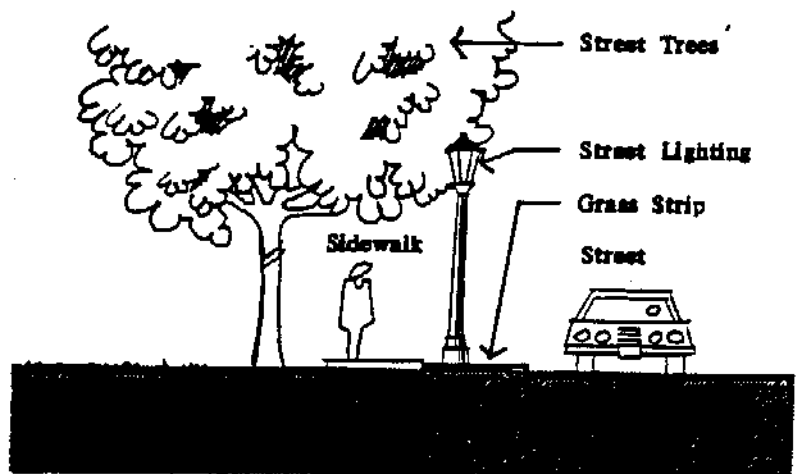
- * Sidewalk width to be 5' concrete paving.
- * New canopy trees to be planted 5' from edge of pavement.
- * New street light poles to be placed 2' from edge of sidewalk.

2. Sidewalks Adjacent to Planting Strip

- * Where existing conditions permit, provide a 5' wide grass strip between street curb and edge of sidewalk.
- * Be consistent with surrounding area (e.g. Bernard Road has grass strip, Ingalls Road does not).



SIDEWALK ADJACENT TO CURB
(E.G. INGALLS ROAD)



SIDEWALK SEPARATED FROM STREET BY GRASS
STRIP (E.G. BERNARD ROAD)

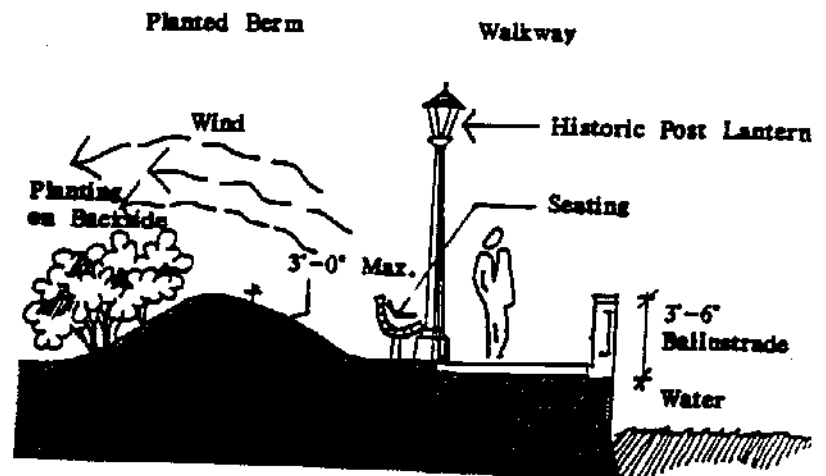
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Pedestrian Pathways - Cross Sections

GW VC

1. Waterfront Walkway with Earth Berm

- * Where water's edge treatment is rebuilt or extended, provide a continuous pedestrian walkway along water's edge.
- * Walkway should be a minimum of 5' wide with concrete paving.
- * A 3'-6" high ballustraded barrier should be placed at the edge of the walkway.
- * A maximum 3' high earth berm should be introduced where wind screening is desired. Low planting should be placed on back side of berm to facilitate growth.



SEAWALL EDGE WITH EARTH BERM FOR WIND SCREENING

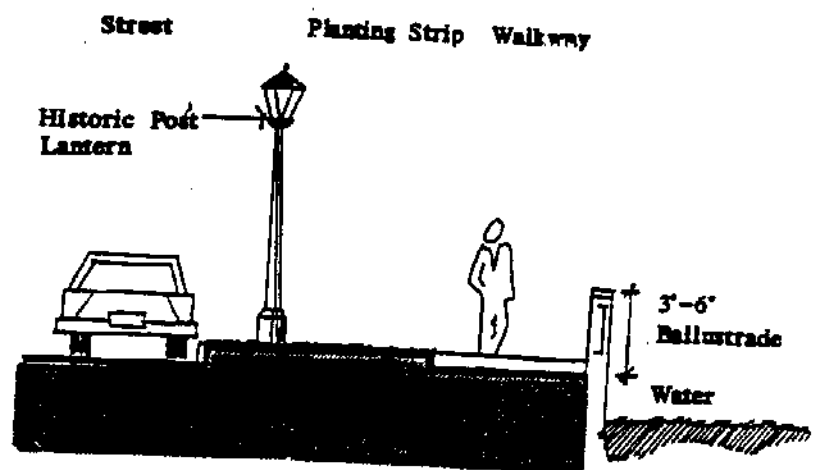
2. Waterfront Walkway without Earth Berm

- * Along McNair Drive an enlarged walking and planting strip is proposed.

Building Orientation and Siting

General Notes

- * Where an orthogonal street grid pattern exists, orient new buildings parallel to the street.
- * Set back the building so that its facade plane is aligned with other buildings on the same street.
- * Spaces between buildings will be regularly shaped rectangles, which are therefore more useful for parking and service areas.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT


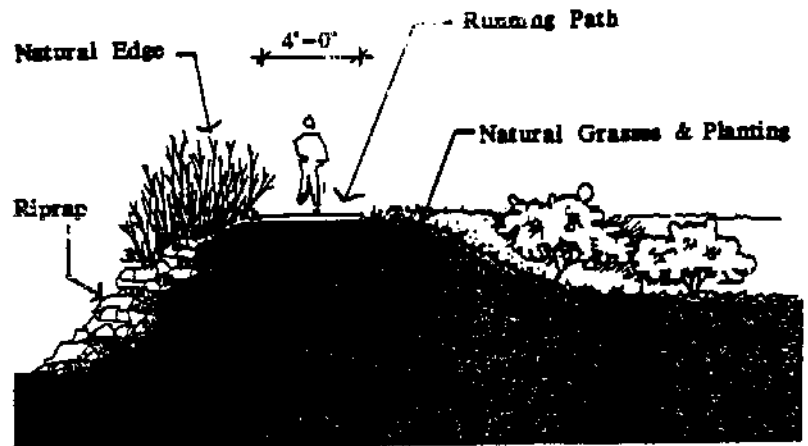
SEAWALL EDGE WITHOUT BERM (PROPOSED MCNAIR DRIVE TREATMENT)

Pedestrian Pathway Cross Sections

GW SS CC OS

1. Mill Pond Edge

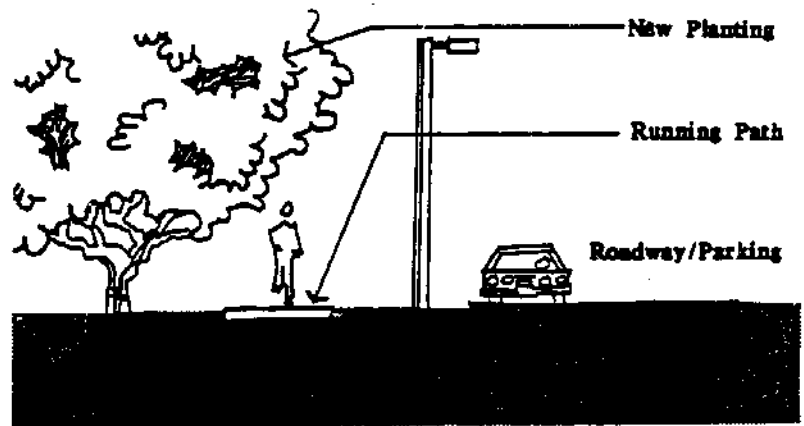
- * Provide a continuous 4' wide bituminous path atop the Mill Creek Seawall.
- * Plant natural grasses and vegetation along running path to stabilize edge and provide a more "natural" environment. Do not mow.



MILL POND EDGE

2. Fenwick Road Edge

- * Provide a 4' wide bituminous running path with minimum 10' offset from roadway edge.
- * Keep new planting of shade trees (e.g. live oaks) a minimum of 10' from edge of path.



FENWICK ROAD EDGE

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Bikeway System

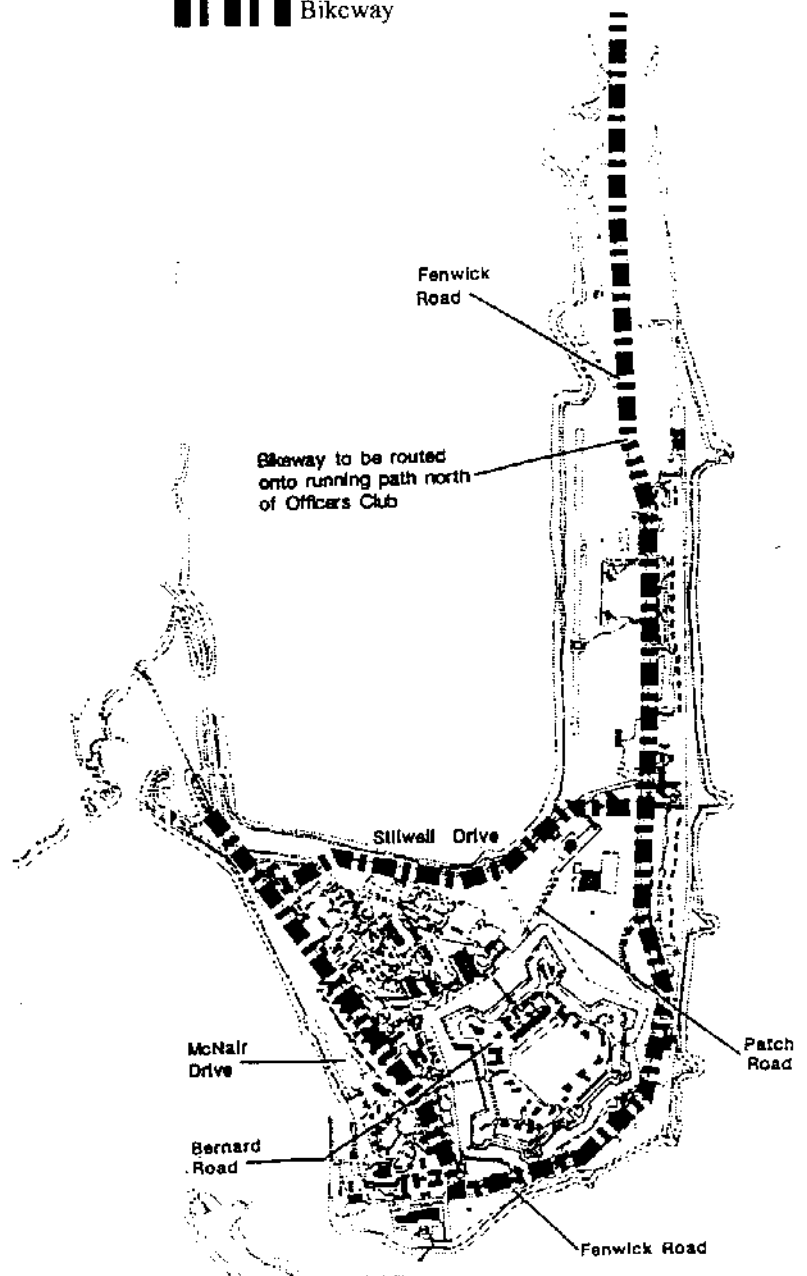
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General Notes

The need exists at Fort Monroe for bicycle lanes along some of the more heavily travelled streets. Administrative personnel now use bicycles for trips between dispersed facilities. Children of families living on post ride to the recreation areas and Dog Beach.

A system of dedicated bikeway lanes within the road cartway is suggested because of limited street cross-section space.

Within the Historic Fort Zone street width is so limited that additional space is not available for a separate bikeway because of the limited volume traffic in the Historic Fort Zone. Bicycles here can share the street cartway.

Key
 Bikeway

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Bikeway System - Details

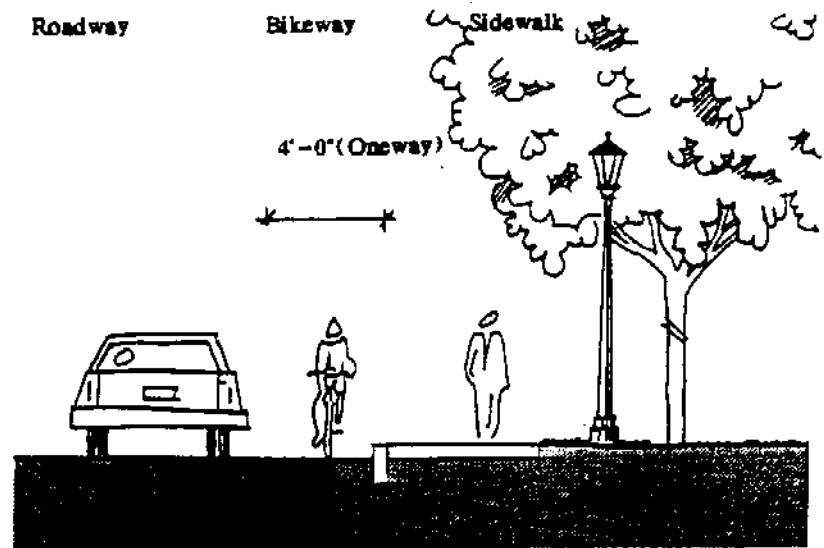
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One-Way System - One Side Only

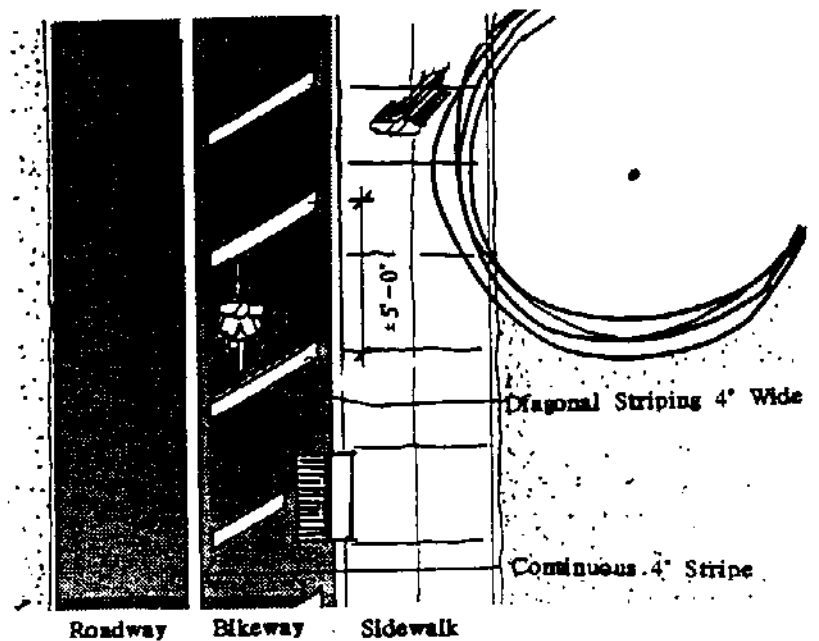
- * Provide a 4 foot wide bicycle lane within the street cartway on one side of street.
- * Maintain bicycle lane consistently on same side of street avoiding cross-overs.
- * Use diagonally painted striping to demarcate the extent of bikeway lane.

One-Way System -- Both Sides of Street

- * Same as above, except use 4' wide bikeway lane on both sides of street.
- * Utilize bike-proof storm water inlet grates.



BIKEWAY STREET CROSS SECTION



BIKEWAY PLAN VIEW

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Off-Street Parking

GW VC HF CC SS BH OS

General Notes

Surface parking is one of the most space-consuming land uses on any Army installation and usually the arrival point for the visitor. Therefore, the quality of these areas greatly influences one's overall image of the post.

Most parking areas at Fort Monroe have been built up in an ad hoc manner without an overall plan for their layout and landscaping. Through maintenance and coordination of new projects, each parking area, especially the more highly visible ones, must be upgraded to conform with the following guidelines:

- * *Separate parking* from main roadway with a planting strip.
- * *Provide clear circulation* into and throughout the parking field.



THE COMMAND CENTER PARKING LOTS MERIT
SUBSTANTIAL IMPROVEMENT.

PARKING EXEMPLIFIES THE PROBLEM OF
UNSIGHTLY LOTS WITHIN THE MOAT.

Off-Street Parking

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THE COMMAND CENTER PARKING LOTS MERIT
SUBSTANTIAL IMPROVEMENT.

PARKING EXEMPLIFIES THE PROBLEM OF
UNSIGHTLY LOTS WITHIN THE MOAT.

Off-Street Parking

GW VC HF CC SS BH OS

- * Where possible, *consolidate small lots* to minimize curb cuts along *main roadway*.
- * *Provide landscaped islands* within the parking field. For planning purposes allocate 400 sf per car for the overall parking site.

Specific design criteria for parking layout is shown on the following sheets. See Landscape Section for design criteria for details and materials.



PARKING AT BUILDING #5 MERITS SOME IMPROVEMENTS. LACK OF SETBACK FROM BUILDINGS AND CONFUSING CIRCULATION ARE MAJOR CONCERNS.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Off-Street Parking

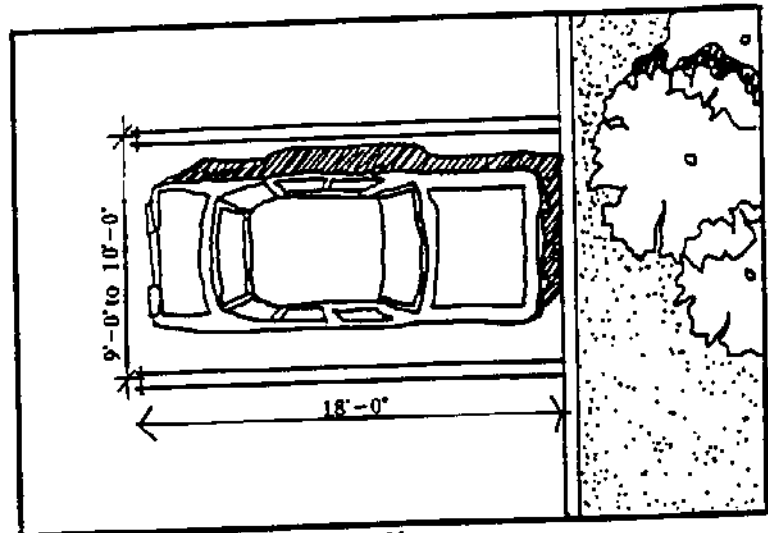
Standard Dimensions

Individual stall size is to be 9'0" x 18'0". Parking lots with larger stall sizes should be restriped where their efficiency can be increased by doing so. The total width of each parking bay is to be 60 feet.

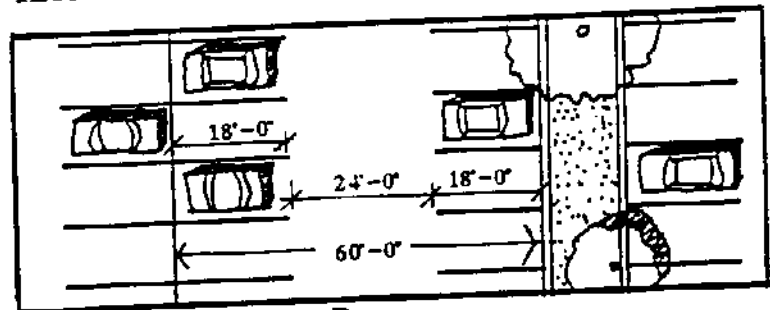
Larger dimensions are permitted outside of the historic areas or in motor pool areas where trucks and service vehicles must be stored. However, these too should be minimized insofar as possible.

Parking lots must be held a minimum of 15' away from buildings and through roadways wherever feasible.

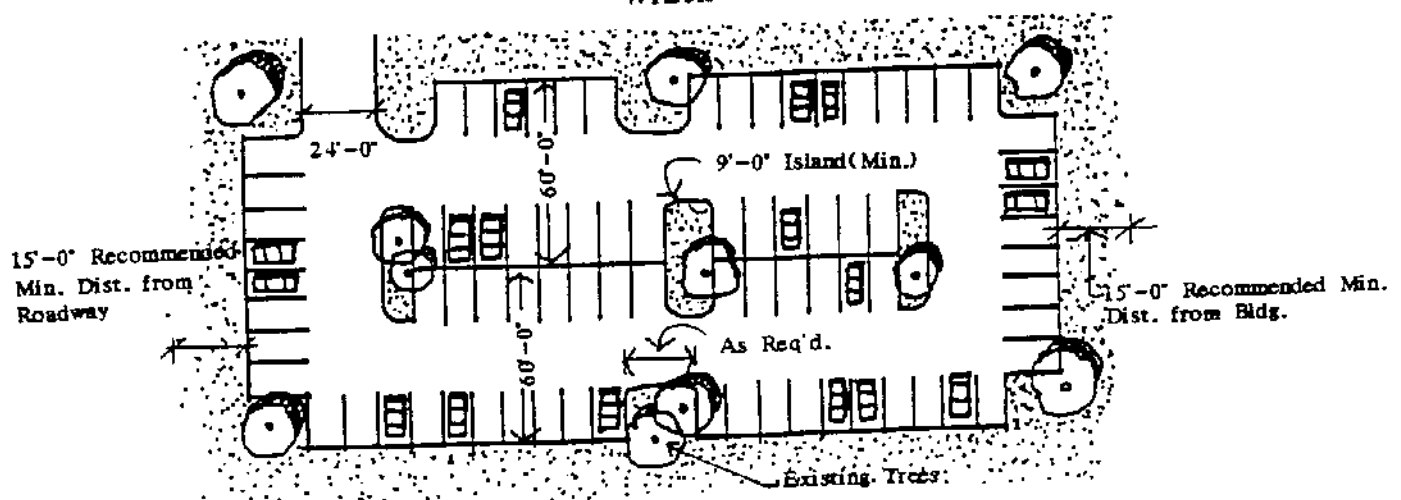
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Individual Parking Stall



Width of Parking Bay



□ AR □ LA □ CE □ ME □ EE □ MT

Off -Street Parking

GW VC CC BH OS

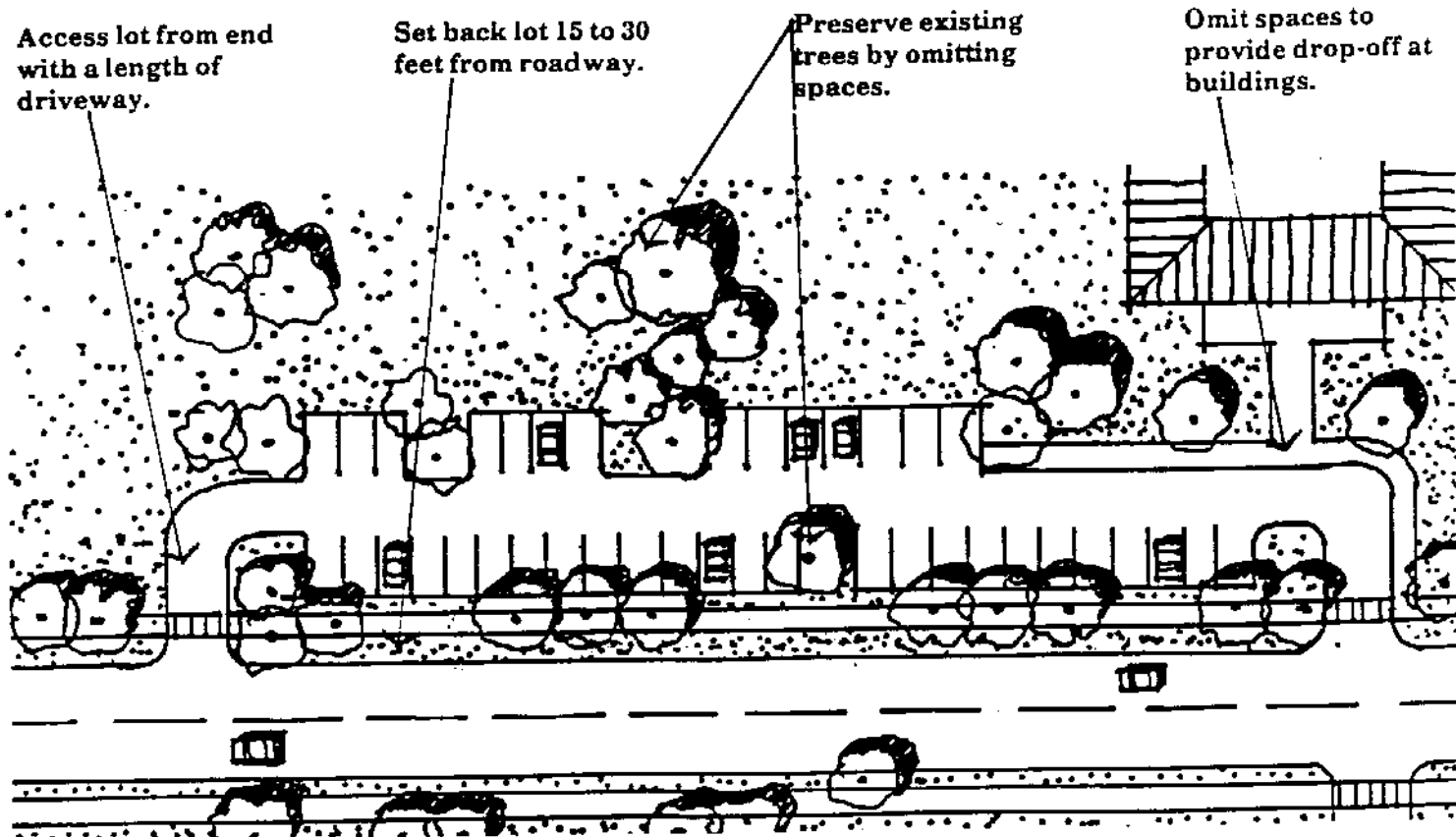
Small Lots

On-street perpendicular parking is extremely undesirable.

60' wide single-bay parking lots are to be used to replace these on-street spaces.

This solution is strongly recommended for parking requirements along Fenwick Road north of Post Exchange.

ON STREET PERPENDICULAR IS A SPECIAL PROBLEM ALONG FENWICK ROAD.



CONCEPTUAL PLAN OF PARKING IMPROVEMENTS

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Off Street Parking

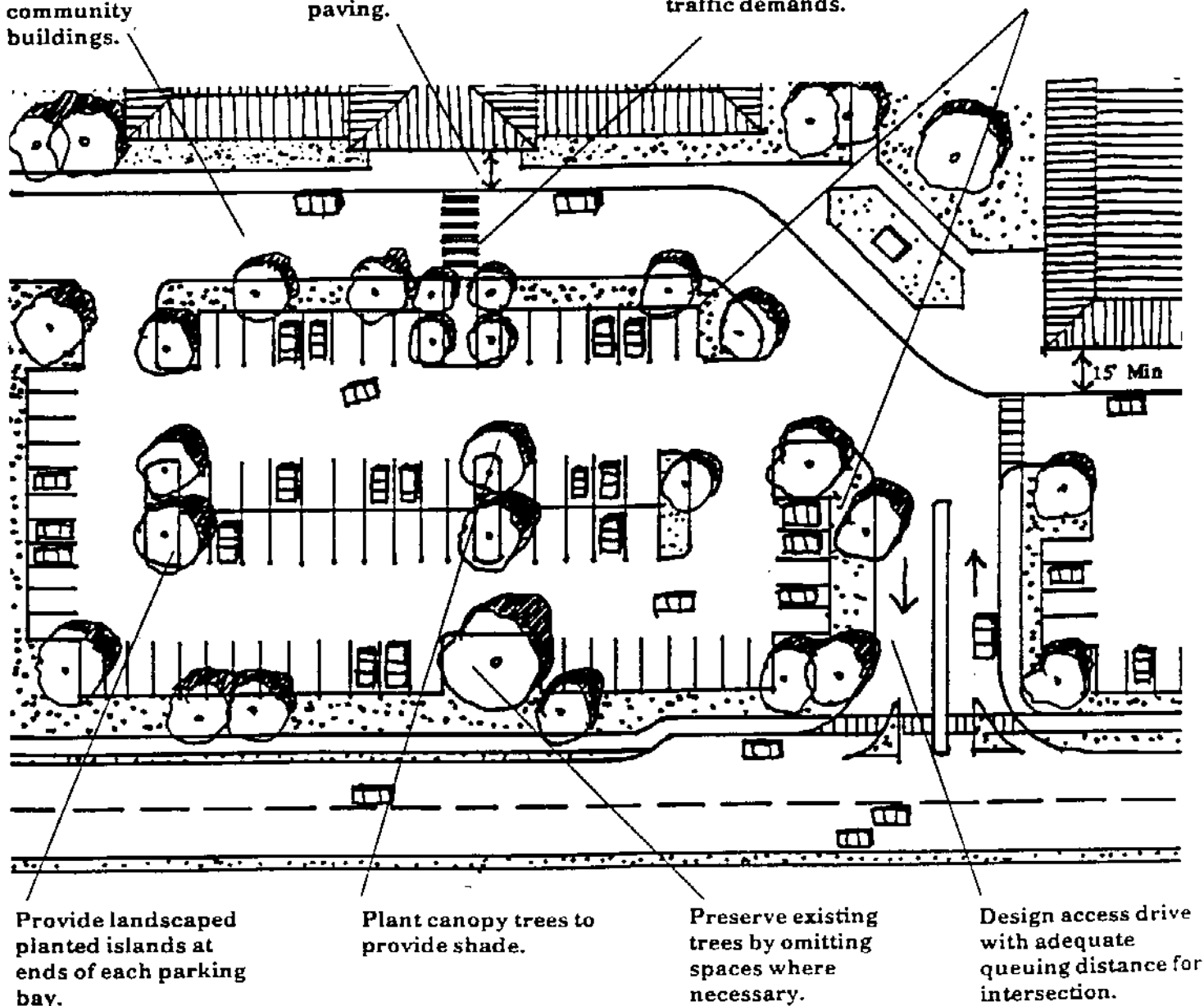
Provide discreet circulation roadway at entrances to major community buildings.

Maintain minimum 15' distance from building to edge of paving.

Provide pedestrian walkway through planted island where traffic demands.

Define perimeter circulation with planted strips.

GW VC HF SS CC BH OS



CONCEPTUAL PLAN OF PARKING IMPROVEMENTS

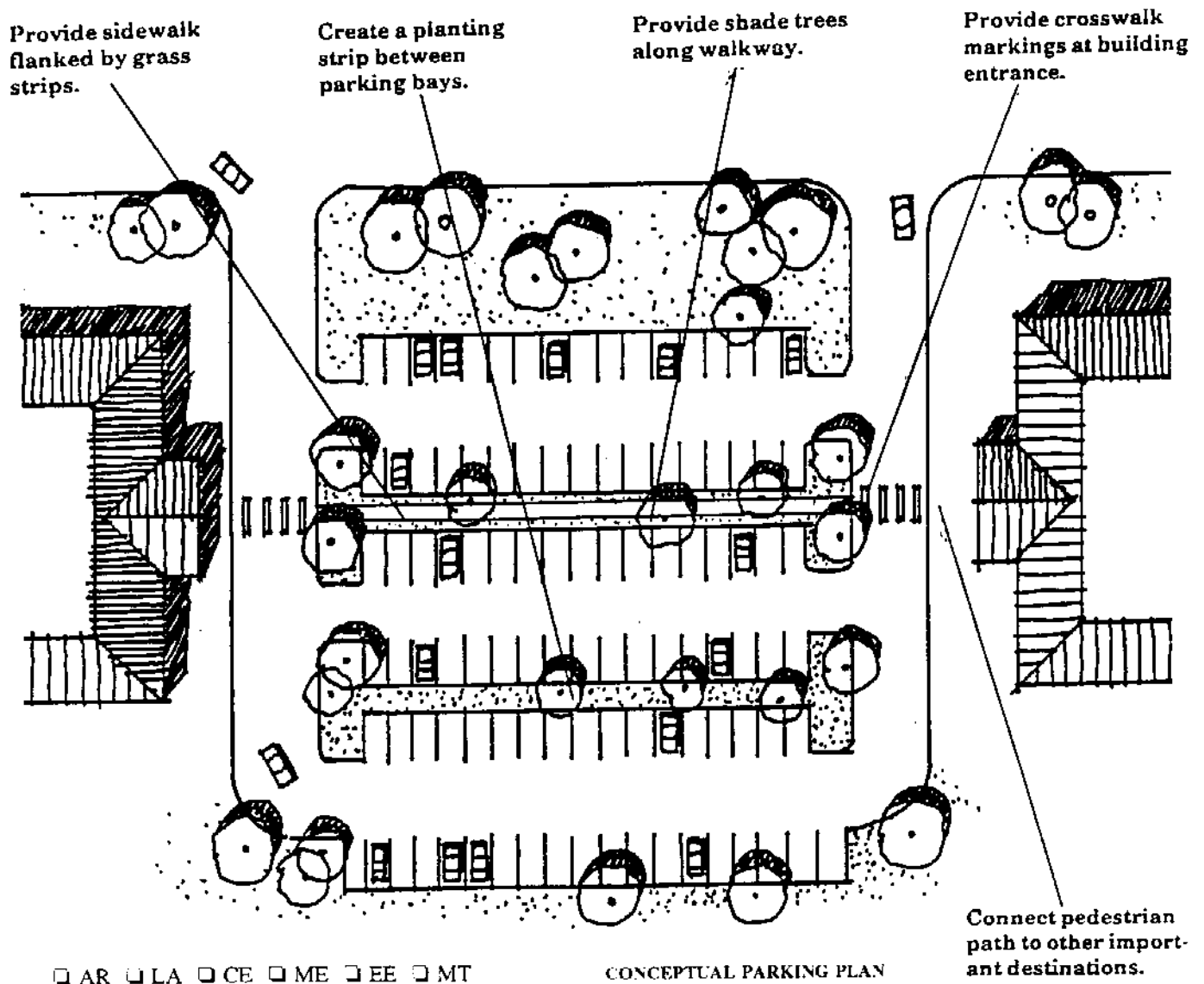
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Off Street Parking

GW VC HF SS CC BH OS

Integrating Pedestrian Pathway

Frequently important destinations must be accessed by pedestrians through large parking fields. In these cases, a special pedestrian pathway is to be provided through the parking to the building entrance.



Off-Street Parking

GW VC HF SS CC BH OS

Planted Islands

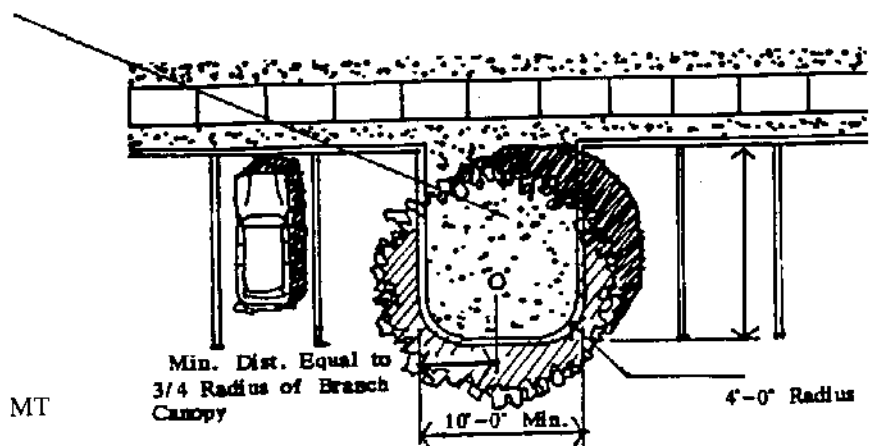
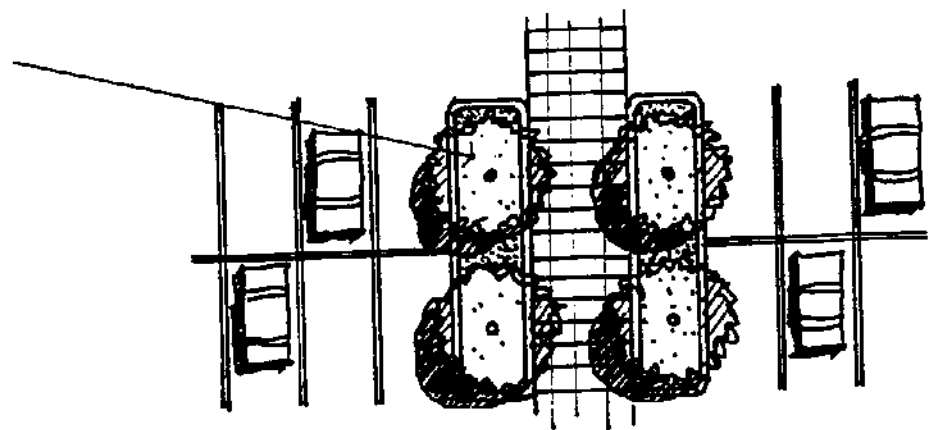
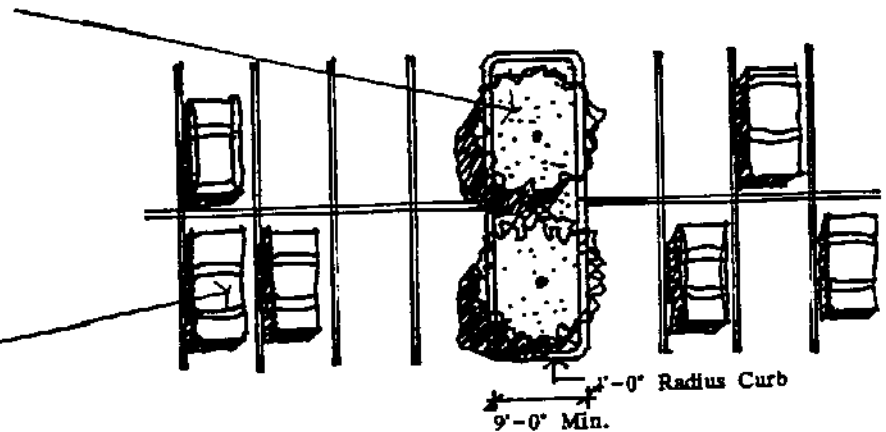
Provisions for landscaping must be made within larger parking lots. Planted islands are to be provided by omitting two parking stalls in adjacent bays.

Canopy trees are recommended for planting to provide shade.

Recommend no more than 15 to 20 spaces between plant islands.

Use planted islands to define a pedestrian path leading to major building entries.

At edges of parking lots, omit single spaces to provide planting or to preserve existing trees.



□ AR □ LA □ CE □ ME □ EE □ MT

Access to Buildings

GW VC HF CC SS BH OS

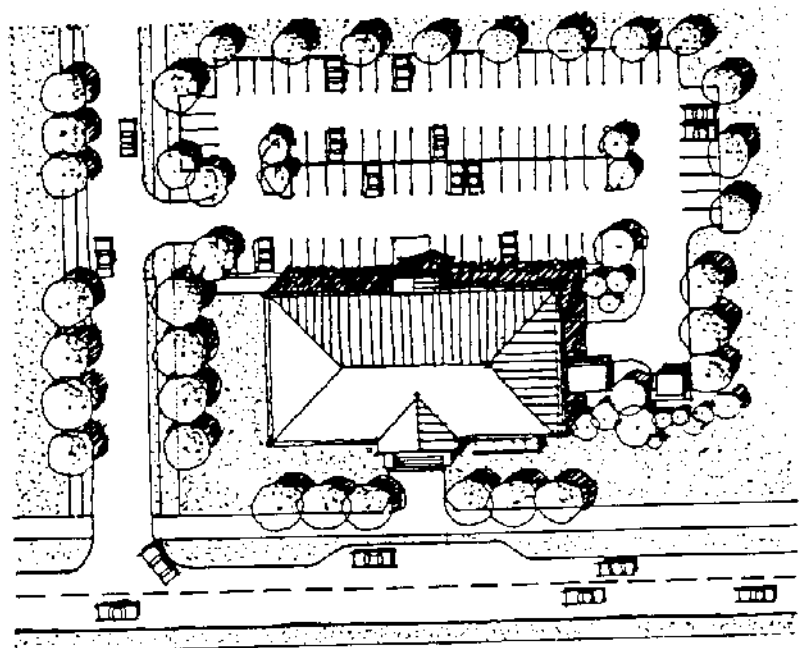
The parking lot is often the arrival point for the visitor. Although a major building front entry may be oriented to the roadway, frequently it is the rear or side entrance that is used because it may be more convenient to the parking.

The proper siting and design of parking lots and the design of pedestrian spaces that lead from parking to the destination building are important to the overall impression of the installation. The following recommendations provide guidance for the siting and design of parking lots and related pedestrian amenities.

**Parking in Rear**

Parking is best located at the rear of buildings and facilities for effective screening of parking areas. Allow a 10 - 15' minimum setback for a planting strip for trees and shrubs and pedestrian walkway between the parking area and back of the building.

BUILDING NO. 161 IS APPROACHED FROM THE REAR WHEN ONE ARRIVES AT THE PARKING LOT.



AR LA CE ME EE MT

PARKING IN REAR

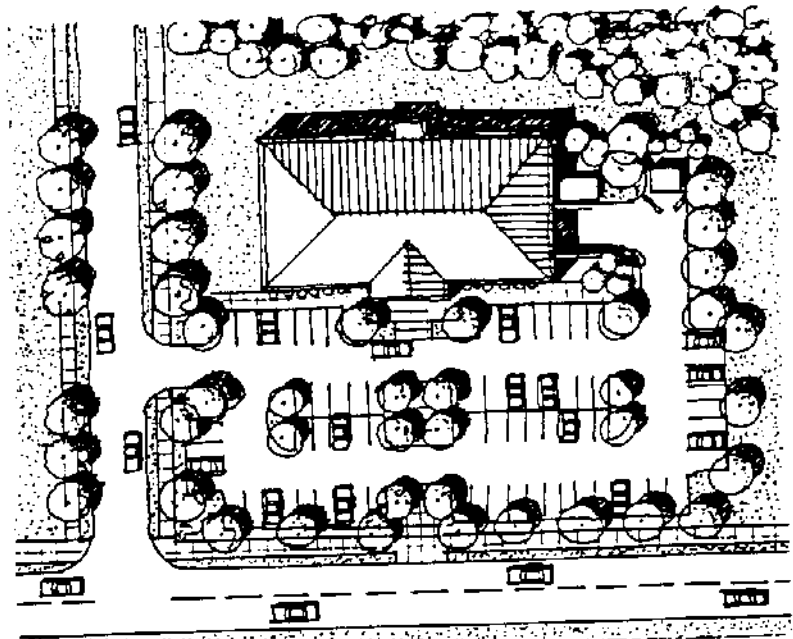
Access to Buildings

GW VC HF CC SS BH OS

Parking in Front

Recommended for buildings set back from roadway more than 100 ft.

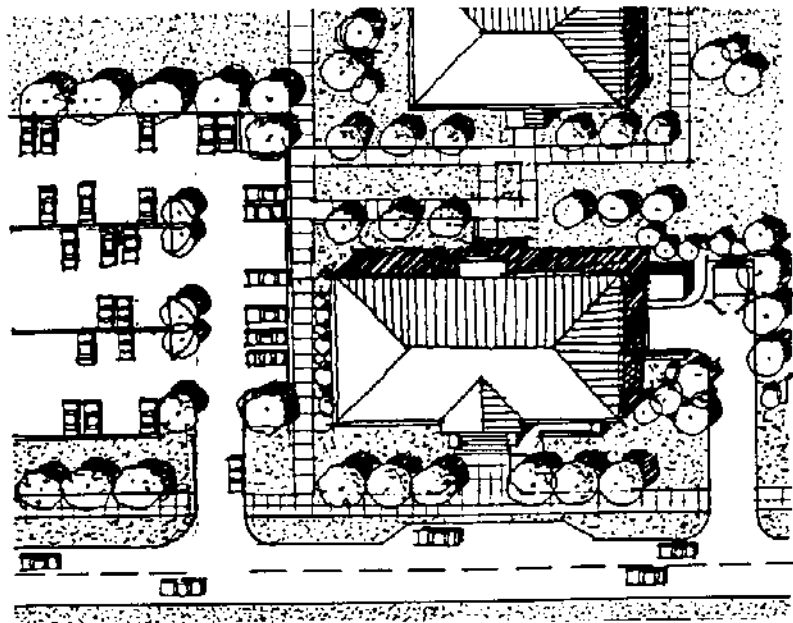
Works well for buildings requiring high level of access and visibility with high turnover in parking, such as community support facilities (Fort Monroe Club, Commissary, etc.).



PARKING IN FRONT

Parking to Side

Recommended where several buildings share common parking field. Special consideration must be made for pedestrian pathways which direct visitors to the front entrance of the destination buildings.



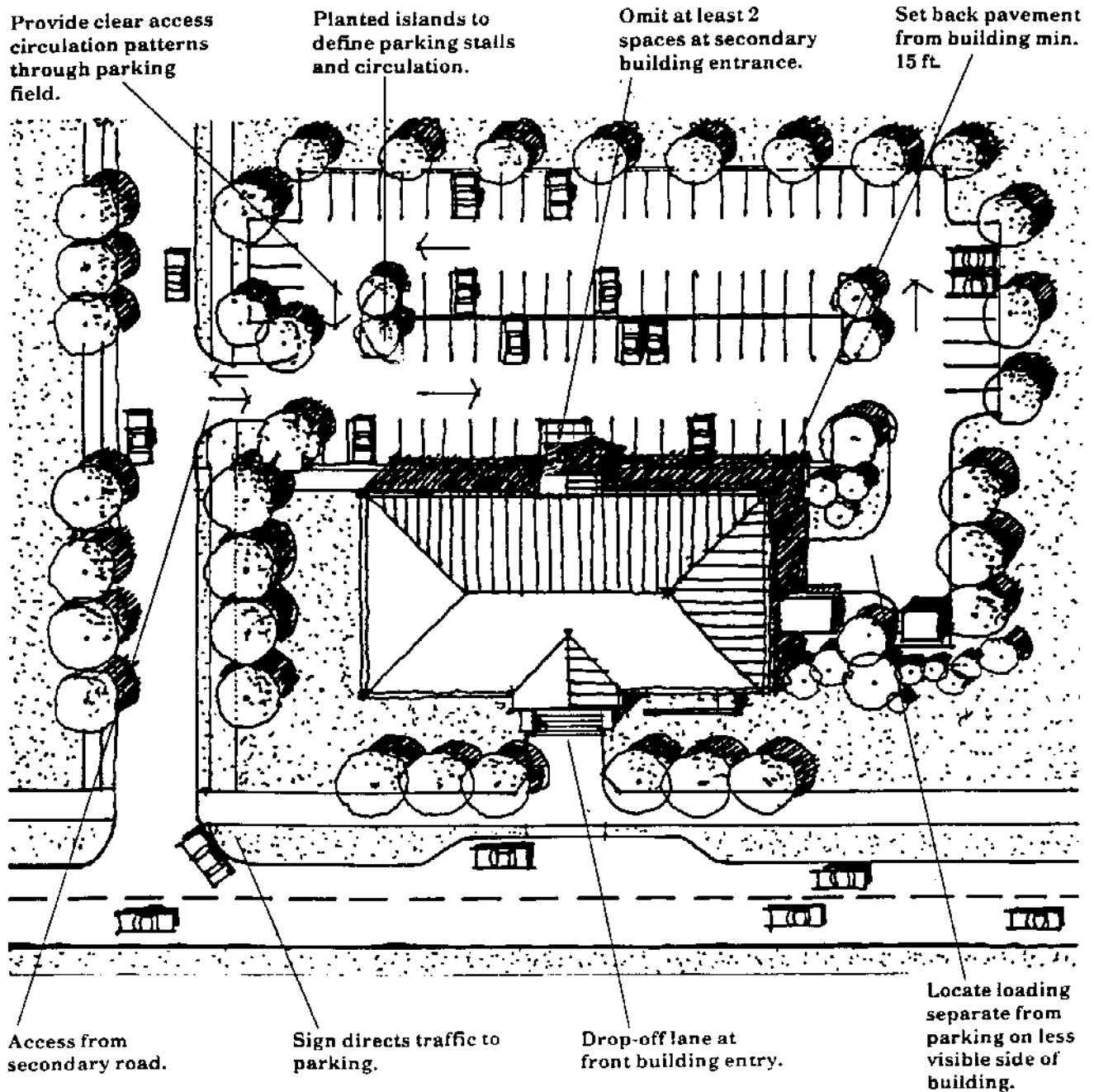
PARKING TO SIDE

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Access to Buildings

GW VC HF CC SS BH OS

Parking in Rear



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Access to Buildings

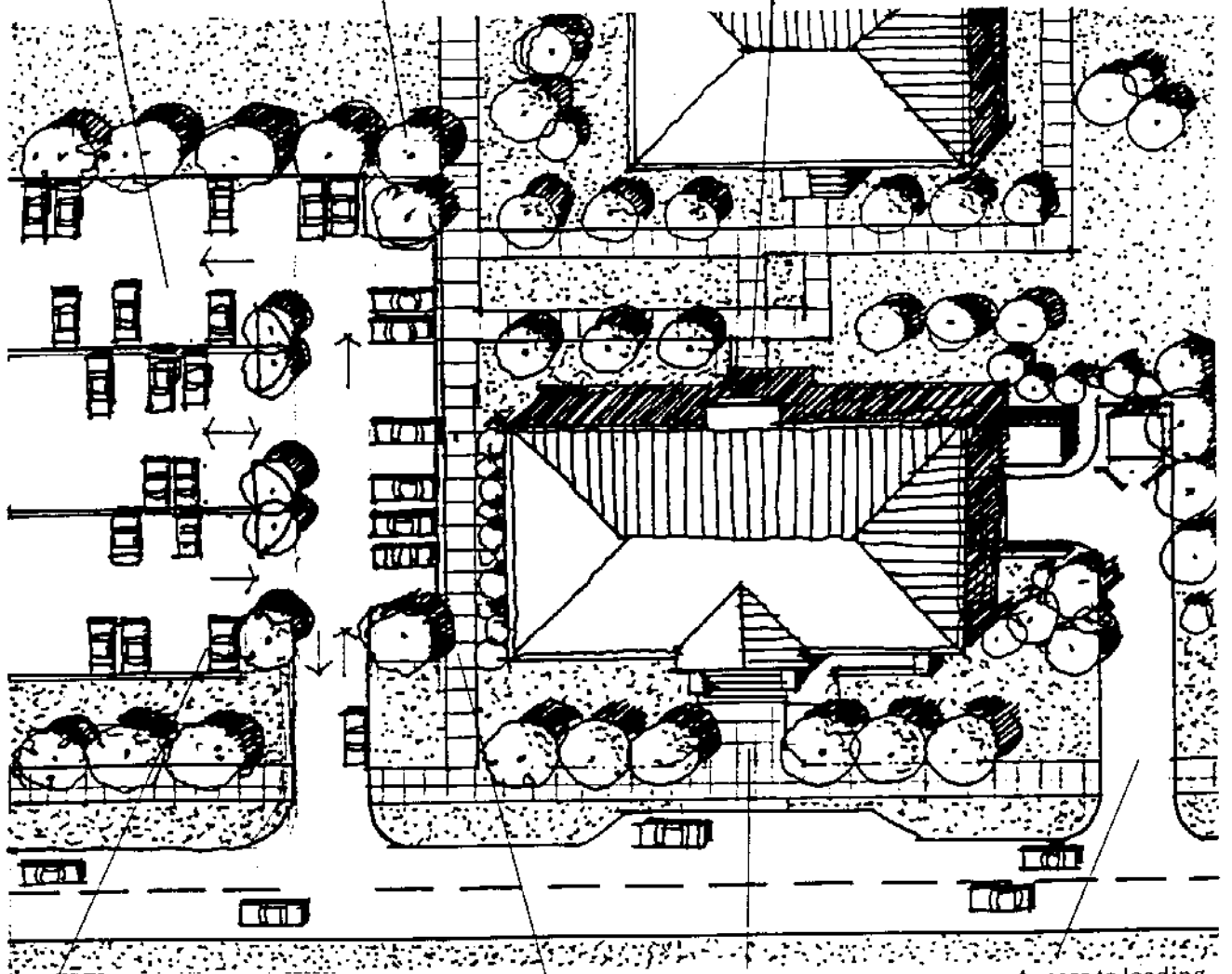
GW VC HF CC SS BH OS

Parking to Side

Provide clear access circulation patterns through parking field.

Planted islands to define parking stalls and circulation.

Sidewalks and plaza spaces lead from parking to building entry.



Set back parking from street; equal building setback where possible.

Sidewalks lead from parking to main building entrance.

Drop-off lane at main building entry.

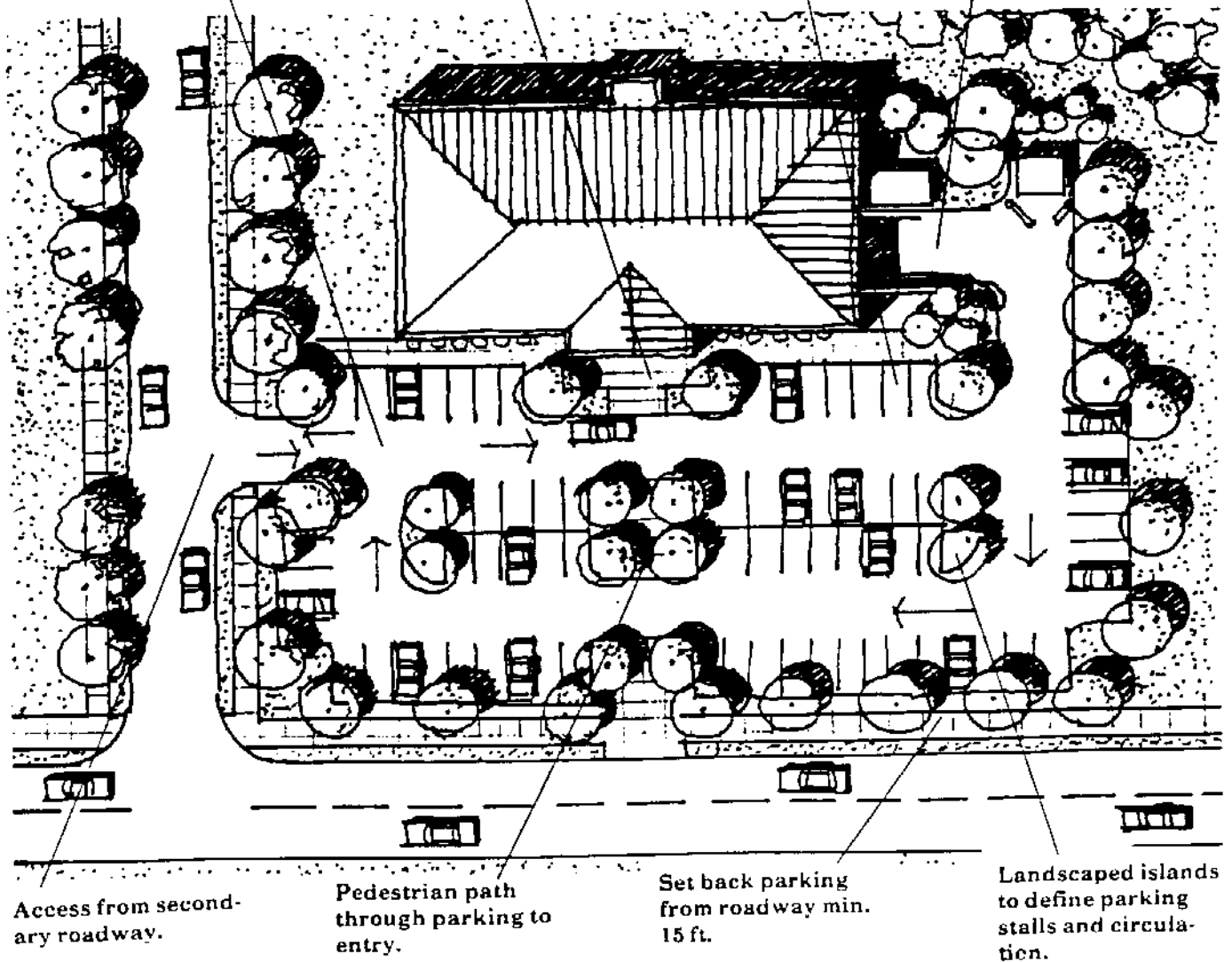
Access to loading separate on less visible side/rear of building.

□ AR □ LA □ CE □ ME □ EE □ MT

Access to Buildings

GW VC HF CC SS BH OS

Parking in Front

Provide clear simple
circulation patterns
within parking field.Omit two or more
parking spaces on
axis with main
building entry.Set back parking
from building min.
10 ft.Locate service
separate from
parking, least visible
side of building.

☐ AR
 ☐ LA
 ☐ CE
 ☐ ME
 ☐ EE
 ☐ MT

Grading in Flood-Prone Areas

GW VC HF CC SS BH OS

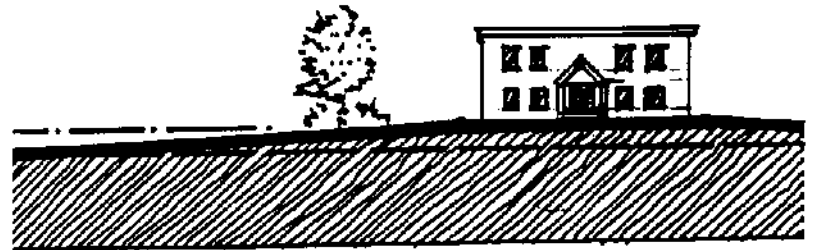
(Buildings with Raised First Floors)

In many areas of Fort Monroe, buildings must be sited to allow for an occasional hurricane surge which will flood the post. Most of the historic buildings have been designed with limestone basements which raise the main floor of the building above the flood level. More recent buildings have been built with fill material gradually sloping away from the building. For new projects follow the following recommendations.

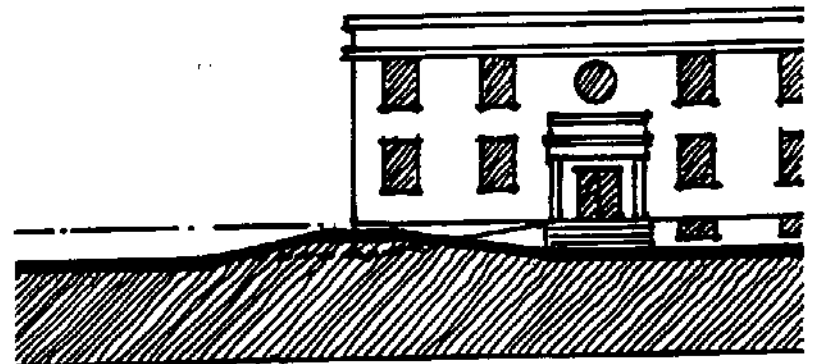
Wherever space permits slope fill material away from building at 3% maximum slope.

Where base of building must be exposed, use belt course or water table course of brick to accent the basement.

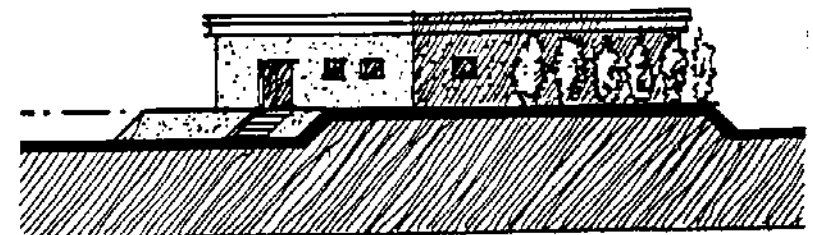
Avoid abrupt terracing around the entire building.



GRADUAL TERRACING (3% SLOPE RECOMMENDED)



EXPRESSION OF BASEMENT; PARTIAL TERRACING AT ENTRY RAMP.



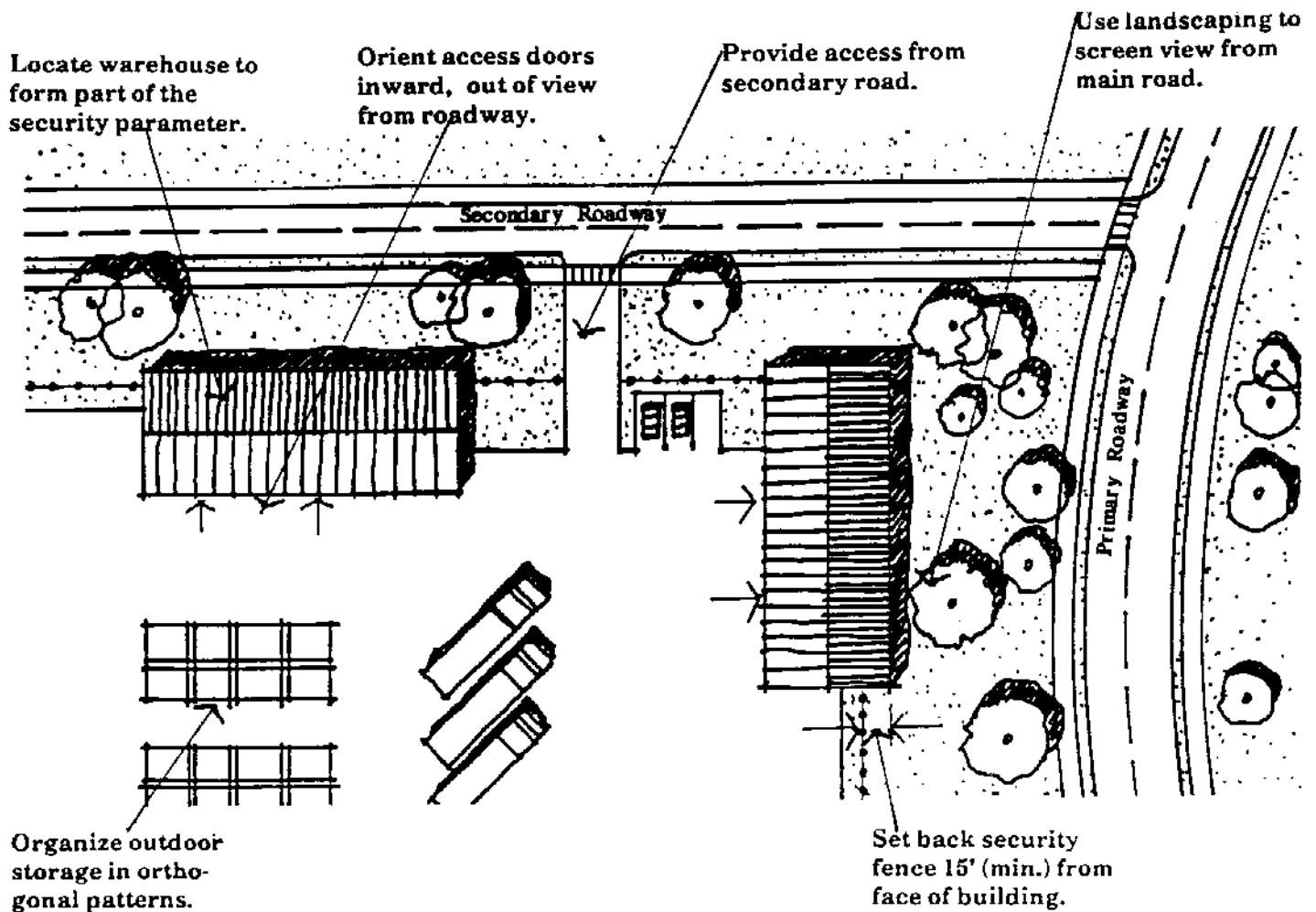
AWKWARD "GOLF-TEE" APPEARANCE RESULTING FROM ABRUPT TERRACING OF FILL-MAKING.

□ AR □ LA □ CE □ ME □ EE □ MT

Warehouse & Storage Yards

VC CC SS BH OS

Careful siting of warehouses and planning of fenced storage yards is essential to insure that these industrial functions are properly screened from view from more public areas. Follow the following rules when locating storage facilities.

**CONCEPTUAL PLAN OF SERVICE YARD**

□ AR □ LA □ CE □ ME □ EE □ MT

Wherry Housing Area

BH

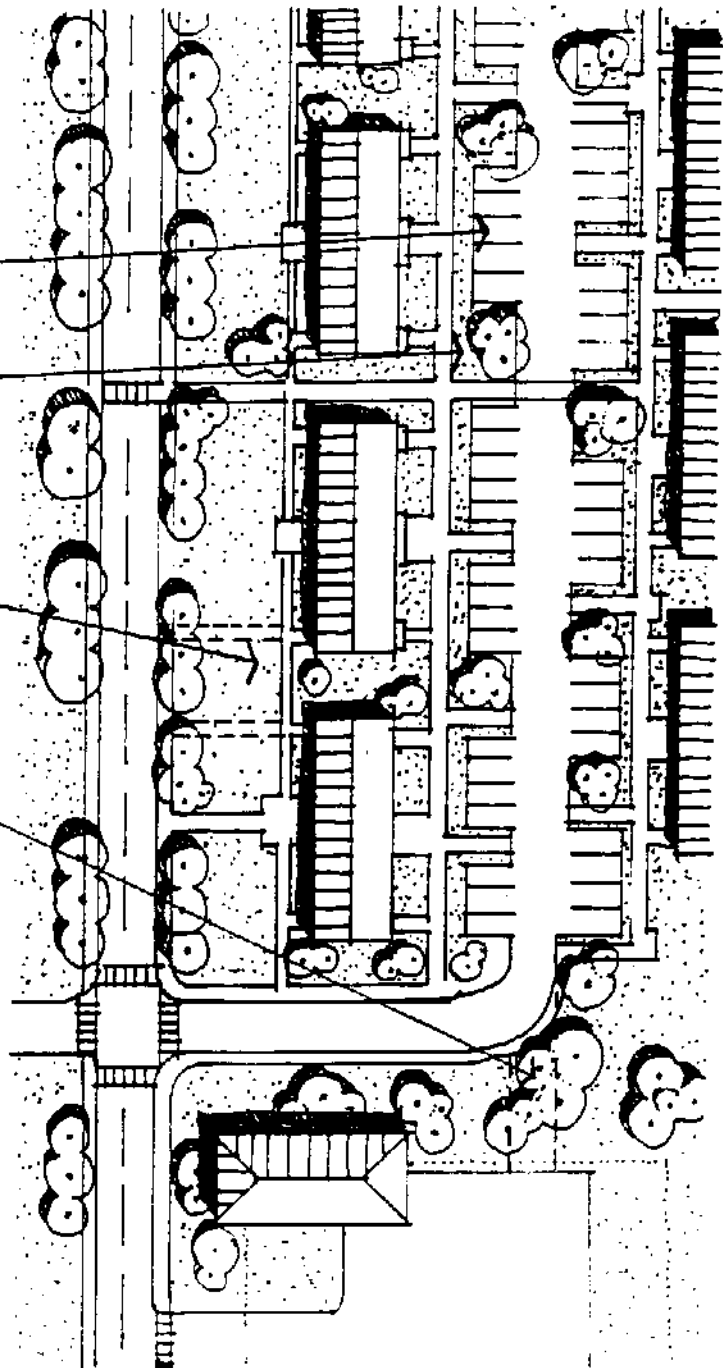
As continuous maintenance and special projects afford opportunities for improvements, the grounds of the Wherry housing areas are to be upgraded according to the following recommendations.

Provide well-defined curbed parking areas.

Provide planted islands to interrupt the otherwise continuous parking bay. Maximum 10 spaces in a row.

Reduce the number of redundant concrete walkways. Develop larger contiguous areas of lawn uninterrupted by parking.

Provide separate access road for housing, discreet from adjacent non-residential functions. Eliminate existing unnecessary links to functionally unrelated facilities.



CONCEPTUAL PLAN

□ AR □ LA □ CE □ ME □ EE □ MT

New Family Housing Development

BH CC OS

Proposed family housing is to be planned to take full advantage of the waterfront site.

Cluster attached units around common parking courtyards.

Modulate row to create residential scale and allow for individual identity for each unit. Step back or step forward each pair of units 4 to 8 feet at each step.

Provide open recreation space between clusters, allowing for view throughout to water from roadway.

Continuous running path along water's edge.

Section 3-2

Architecture

General Notes

GW VC HF CC SS BH OS

Historical Context

Old Point Comfort has a lengthy history as an Army installation due to its strategic position at the mouth of the Hampton Roads. The military mission and the facilities required to support that mission have changed from one period of history to another as technological and tactical conditions demanded. The result has been a wide array of architectural styles on post today. A few important features tie these varying styles together and help to unify the image of the whole post.

Scale and Massing

Fort Monroe is a relatively densely developed Army installation where siting constraints have caused buildings of various ages and functions to be clustered together forming a campus-like environment. Because the scale of different buildings has been somewhat consistent in each area, the effect has been a unified image. This consistent scale must be continued in new development. Although floor areas and overall bulk of buildings must vary to accommodate required functions, awkward differences in scale must be resolved by carefully shaping the building's mass and by articulating the facade design.

For renovations and addition of historical structures, follow the recommendations of The Secretary of the *Interior's Standards for Rehabilitation of Historic Buildings*. The historic character of existing buildings

must be maintained or restored wherever feasible.

The design guidelines for new buildings are based upon the prevailing architectural features common to most of the existing structures. The intended result is the continuation of a unified theme in building materials, detailing, fenestration, roof profiles and general character.

Materials and Colors

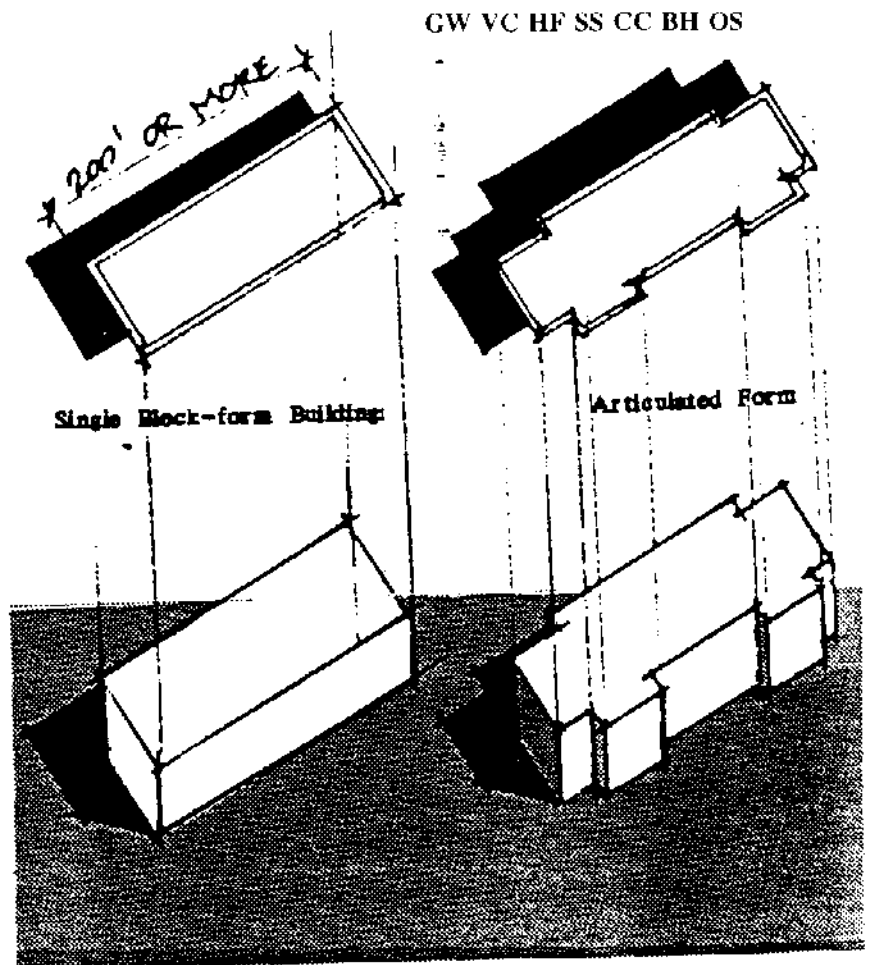
To maintain a coordinated "palate" of architectural materials and colors, page 3-2-23 through 3-2-26 make recommendations for most major building elements. Life cycle costs and value engineering concerns may result in refinements to these recommendations. In general the goal is to match the material and color selections for major building components within a single visual zone. Where existing buildings exist, these serve as the basis for matching new buildings.

□ AR □ LA □ CE □ ME □ EE □ MT

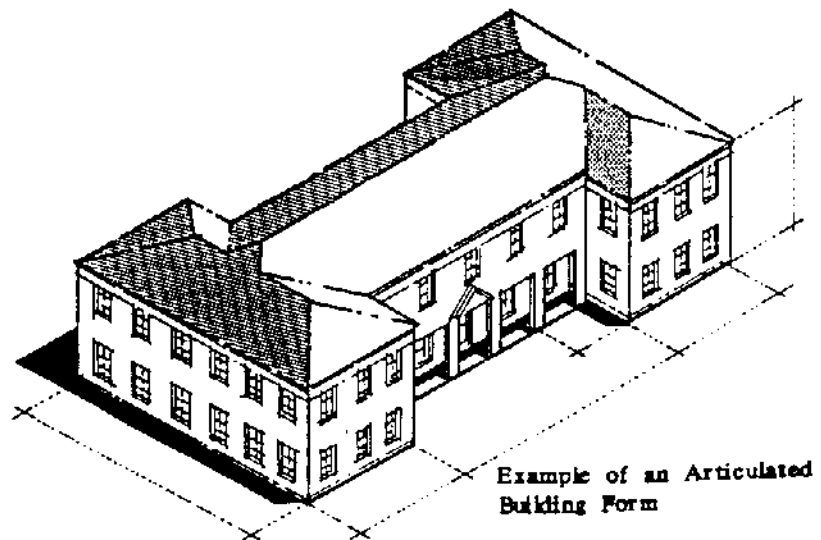
Massing and Articulation of Large Buildings

Simple block-forms for larger buildings appear awkward and out-of-scale when located among smaller-scaled structures.

When the program requires a large building mass, the form must be "articulated" by modulating the facade plane. This breaks up the otherwise massive form and reduces the apparent scale to better fit with the surrounding buildings.



This example shows a large building which has been "articulated" to appear as three smaller rectangular forms. A central gallery flanked by two pavilions.

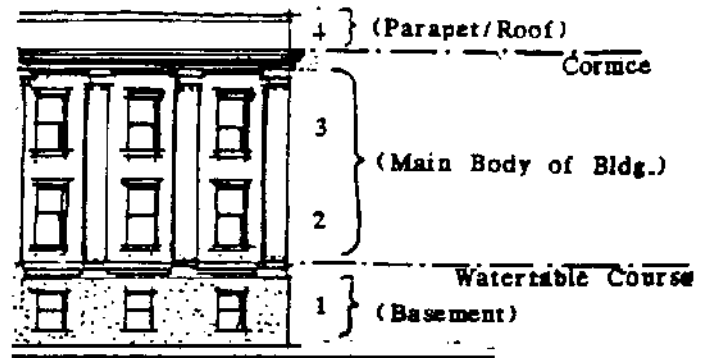


☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Building Height

- A half-story is a sloped roof with dormers or a basement story with windows.
- Wherever possible, new buildings are to be built to match the cornice and roof slopes of adjacent structures.
- When program requirements dictate higher building forms, follow guideline.

GW VC HF SS CC BH OS



2 1/2 STORY BUILDING EXEMPLIFIES INGALLS ROAD SCALE

Recommended Maximum Building Heights							
	GW	VC	HF	SS	CC	BH	OS
2-2½ stories				●	●	●	●
3-3½ stories	●	●	●				



3 STORY BUILDING #161 IS TYPICAL FOR THE COMMAND CENTER.

Massing and Articulation

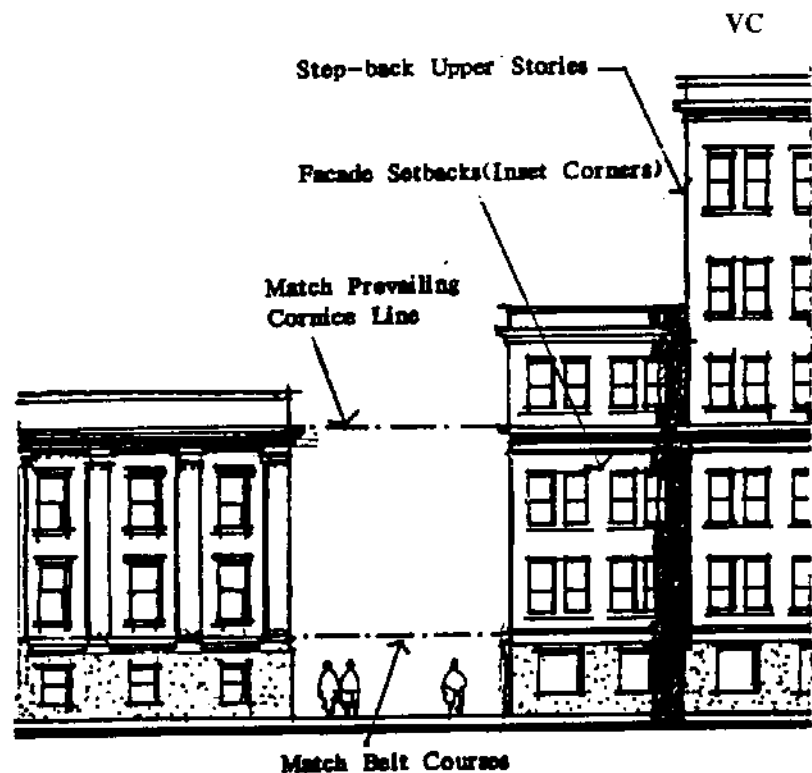
Taller Buildings

Tall massive buildings, when placed among much smaller buildings, may appear awkward and out-of-place.

When the program requires a taller building in an area of smaller structures, the design of the taller building must be "articulated" to reflect the predominant scale of the surrounding area.

The following design techniques are to be used where appropriate:

- Match cornice line height where adjacent buildings have prominent cornice features.
- Match belt courses or other important lines of vertical articulations.
- Modulate facade plane to reduce overall scale of building mass.
- Step-back upper stories above prevailing cornice line.



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

COURTYARD SPACES TIE TOGETHER THE COMPLEX
OF ADMINISTRATION BUILDINGS IN THE COMMAND
CENTER.

Massing & Articulation of Taller Buildings

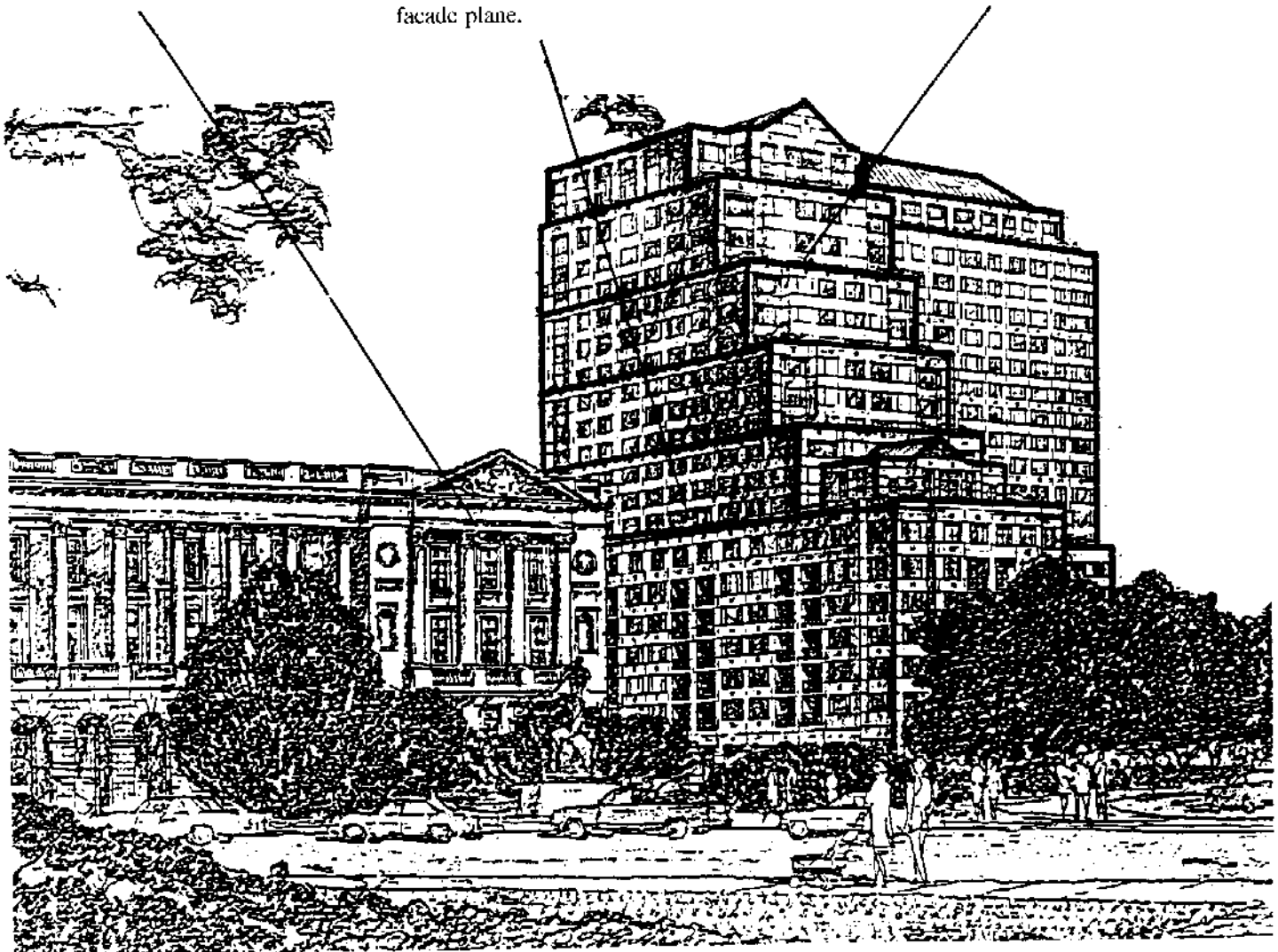
VC

This is an example of a very tall building which has been designed to respect the scale of adjacent historic buildings.

Prevailing cornice line is continued.

Overall bulk of building is reduced by modulating facade plane.

Floors rising above the cornice line are stepped back.



Existing Building

New Building

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Fenestration

GW VC HF BH CC OS SS

Punched Openings

Use punched openings in masonry walls.

Windows must be designed with divided sash, with muntin and mullions; 3-over-3 double-hung or standard.



INDIVIDUAL WINDOW OPENINGS IN BRICK MASONRY WALLS ARE THE TRADITION IN FORT MONROE ARCHITECTURE (BUILDING NO. 134).

Avoid strip window designs.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

HORIZONTAL WINDOWS ARE NOT RECOMMENDED

Fenestration

GW VC HF SS CC BH OS

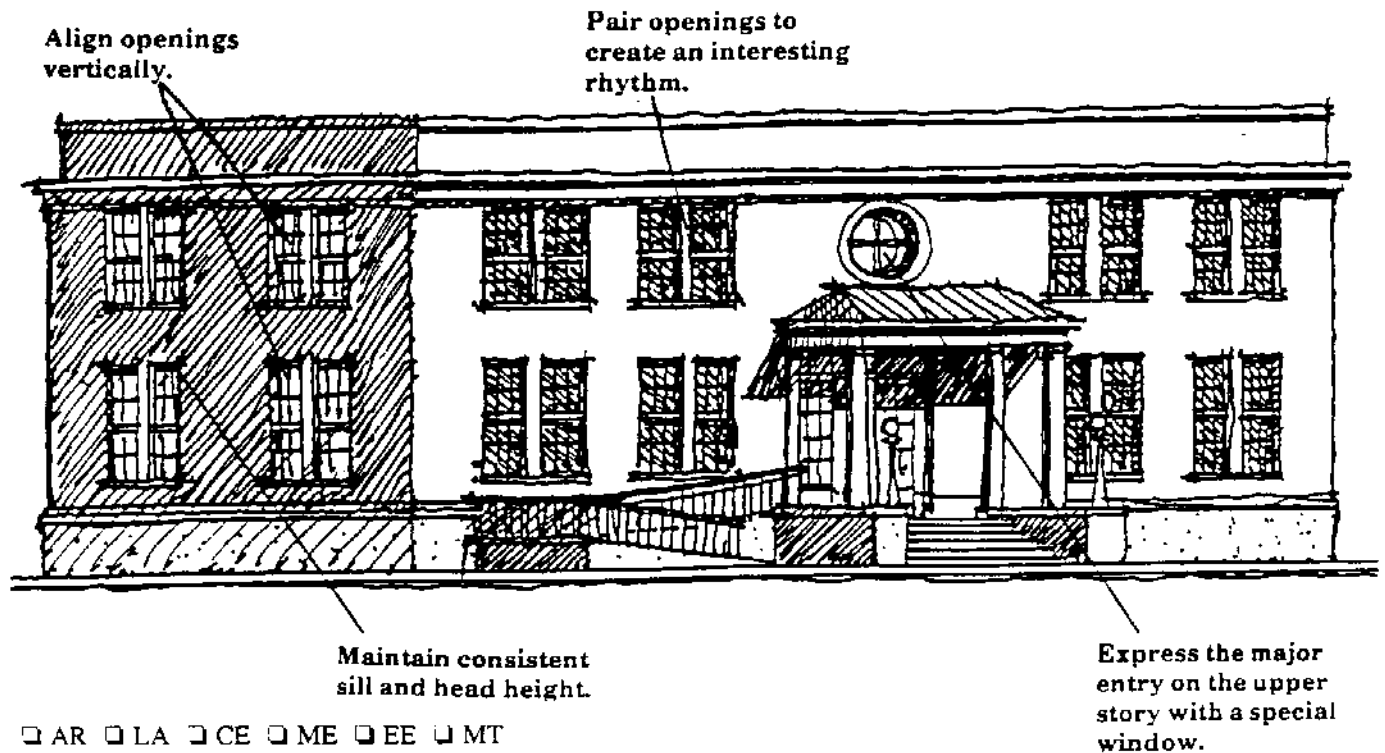
Placement of Windows

The rhythm, pattern and proportions of window openings are major factors in a building's design character.

Careful placement of windows is to be considered to reinforce the building's formality, particularly where the building is prominently located.



FORMAL SYMMETRICAL WINDOW PLACEMENT



Design Character

GW VC HF SS CC BH OS

Facade Detailing

Fort Monroe enjoys a rich architectural tradition offered brick and limestone buildings trimmed in wood painted white. This tradition should be continued in the designs of new structures, particularly those to be located within the existing historic areas of the post.

The following recommendations outline certain architectural features which are important to Fort Monroe's historical theme. They are to be employed in the designs of new structures.

Cornices and belt courses: create moulding profiles with brick, limestone or cast stone at the parapet or eave line.

Pilasters: modulate the brick surface to create shadow-lines on the facade to imply proportion and articulate the larger mass of the building.

Piers and columns: use limestone, cast stone or brick moldings to form the base and capitals of support columns. Shapes and details are to be simplified neoclassical forms.

Brick pattern: Common Bond (header-bond) is the predominant pattern in historic buildings. Running Bond is also used.



BUILDING #37



QUARTERS #33

□ AR □ LA □ CE □ ME □ EE □ MT

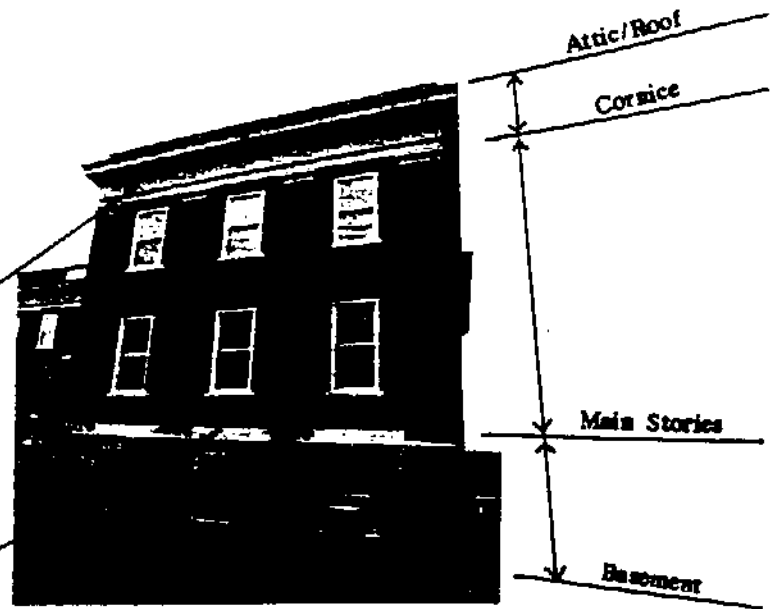
Design Character

GW VC HF CC SS BH OS

Facade Detailing

Basement articulation: the base of the wall is detailed with a water table course of brick, or a band course of row locks or soldiers (brick), or with a change in material to limestone or cast stone. This technique is recommended where the main floor must be raised above the grade level for flood protection.

- Buildings should be designed to express their base, shaft and top. Use of limestone or cast stone with brick to distinguish basement, main story and cornice lines is recommended. Modulation of the face plane.
- Use of horizontal moldings and water table courses is recommended, encouraged to add scale and interest.



Colonnades and Arcades: porches are a strong part of the post's architectural tradition due to the hot weather. White neoclassical columns and balustrades are often the most highly visible and distinguished feature of the building's design. Wherever porches, overhangs, recessed entries or canopies are used, the support piers are to be designed with simplified neoclassical details expressing the capitals, entablatures and balustrades as traditional architectural features which emphasize the importance of the building's entrance.



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

DISTINCTIVE COLONNADES OF QUARTERS 141 AND 142.

Design Character

GW VC HF

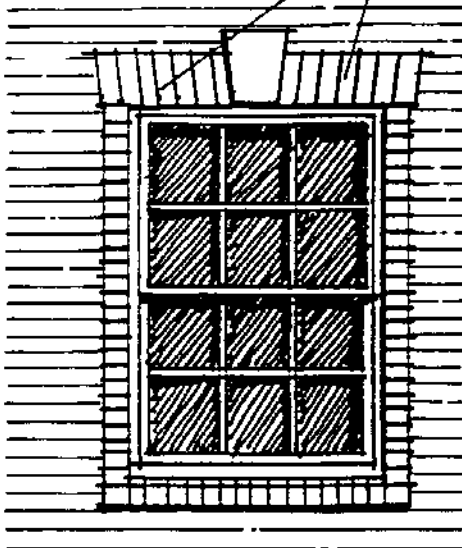
Detailing Of Openings

Brick masonry is one of the most important features which distinguishes Fort Monroe architecture. Special brick masonry detailing surrounding windows should be used to reflect the historic context of Fort Monroe. The following illustrations serve as examples.

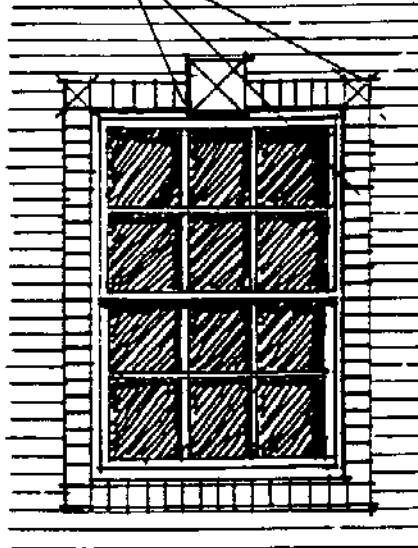


BRICK MASONRY DETAILING SURROUNDING PUNCHED WINDOW OPENINGS DISTINGUISHES FORT MONROE ARCHITECTURE.

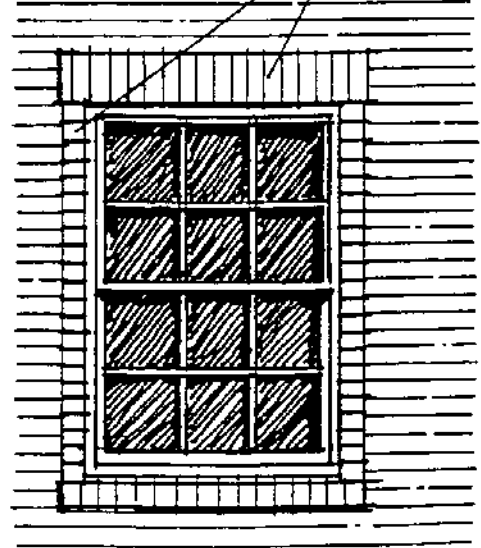
Jack arch at window head; row locks stacked at jambs.



Row locks all around; accent square-shapes in brick at corners.



Soldier Course at head; row locks stacked at jambs.



□ AR □ LA □ CE □ ME □ EE □ MT

Design Character

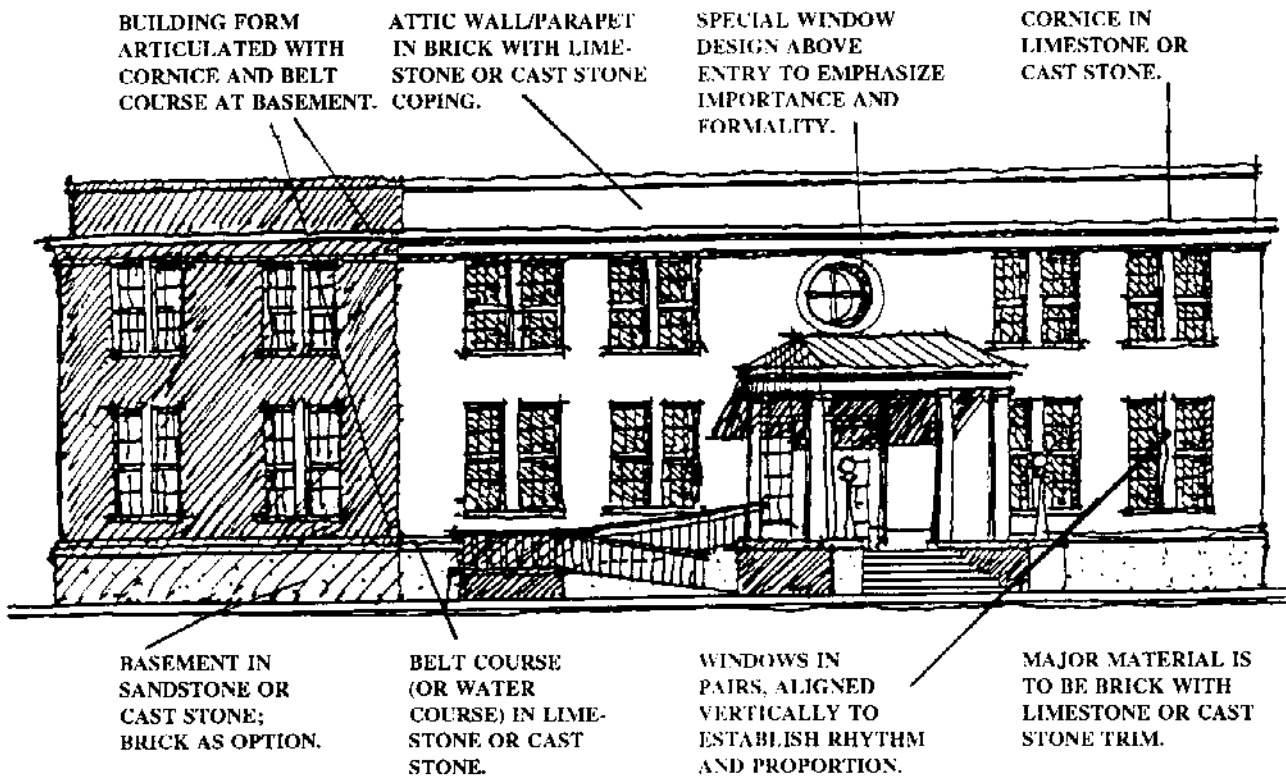
GW VC HF SS

Administrative Buildings

All large buildings, particularly those with important functions, are to be designed in the formal style illustrated below. This style should be interpreted using current building practices and economies.



BUILDING NO. 161 EXEMPLIFIES THE FORMAL STYLE OF THE COMMAND CENTER.



□ AR □ LA □ CE □ ME □ EE □ MT

Design Character

CC

**Community Support Buildings
(Post Exchange Vicinity)**

The Post Exchange vicinity is planned for development much like a commercial shopping center, with several buildings clustered around a central parking field. All buildings in this complex are to be of similar design and matching materials. The illustration below shows recommended features.



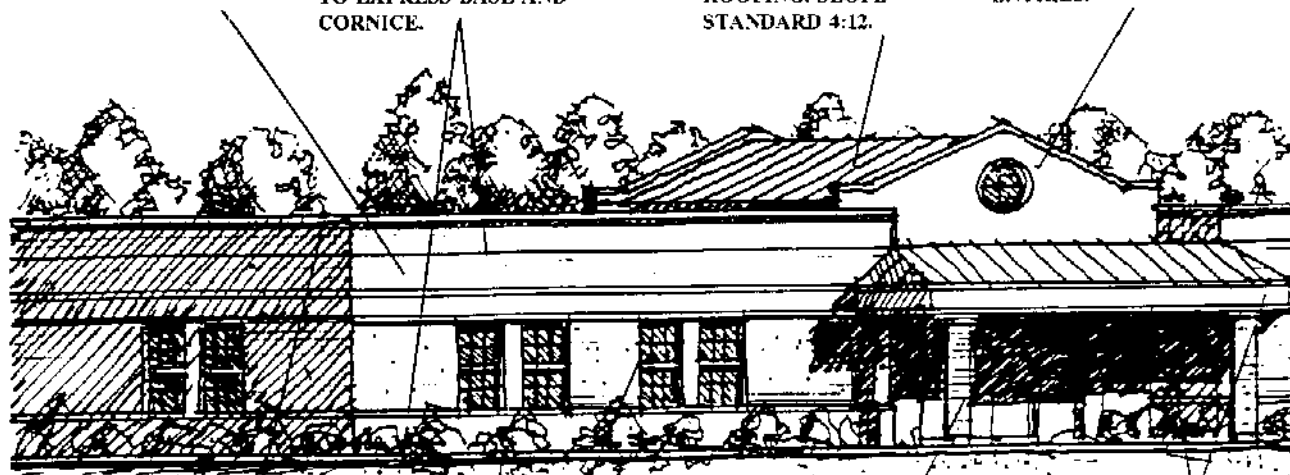
THE NEW POST EXCHANGE BUILDING SETS THE THEME FOR THAT PORTION OF THE COMMUNITY CENTER.

MAJOR MATERIAL TO BE BRICK MASONRY.

USE BELT COURSES (SOLDIER COURSES) TO EXPRESS BASE AND CORNICE.

USE STANDING SEAM METAL ROOFING. SLOPE STANDARD 4:12.

USE PEDIMENTS TO EMPHASIZE IMPORTANT ENTRIES.



ROOF TO BE FLAT WITH SLOPED PORTIONS AT ENTRIES.

WINDOWS TO BE OF CONSISTENT SIZE AND PROPORTION.

COLUMNS TO BE SQUARE OR LARGE DIAMETER ROUND BRICK MASONRY.

USE PENTEAVE ROOFS AND RECESSES TO PROVIDE COVER AT ENTRIES.

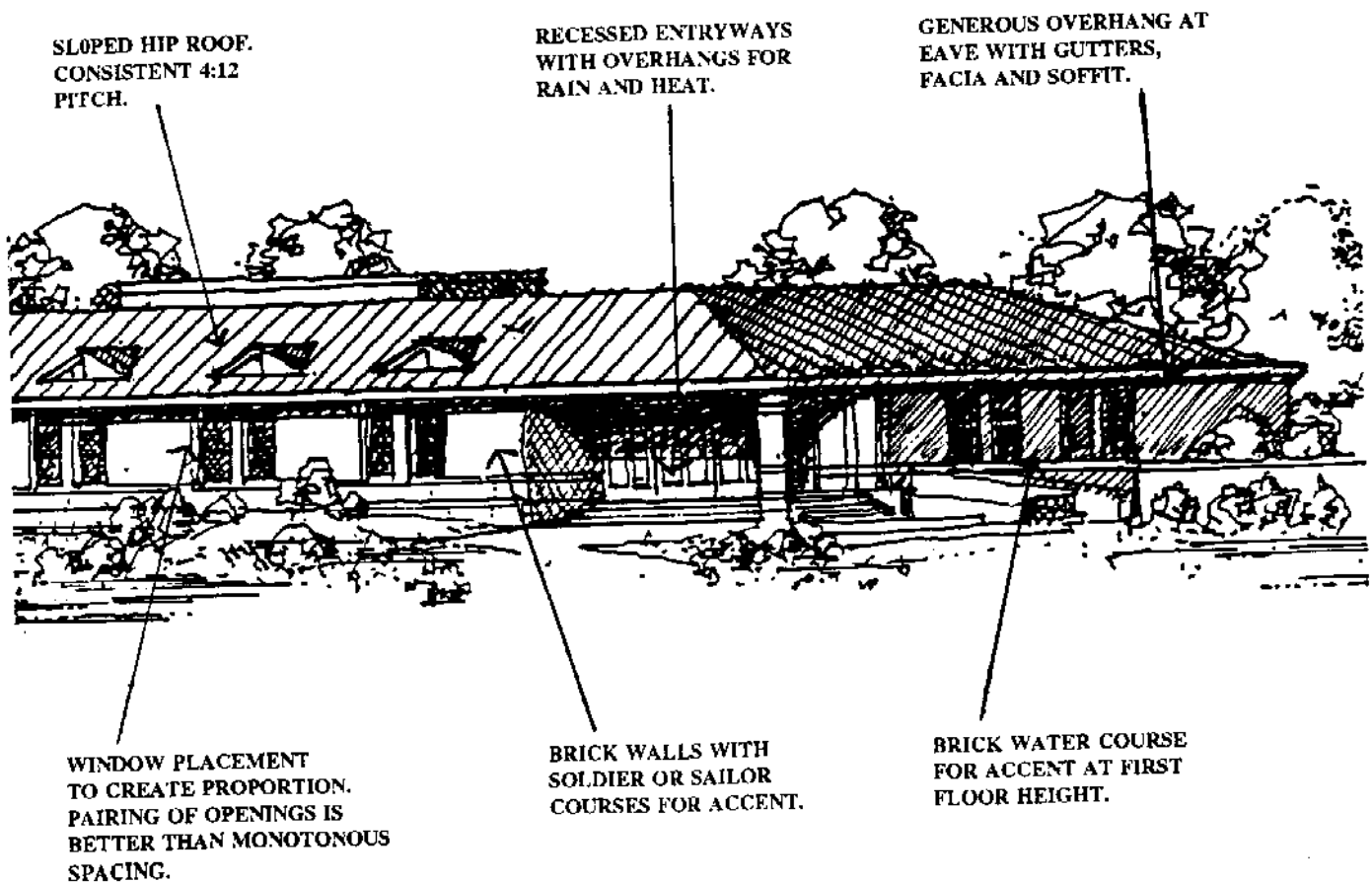
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Design Character

CC BH OS

**Community Support Buildings
(Other Areas)**

Several new buildings are proposed for the Community Center zone, in an area where virtually no buildings currently exist. These new projects must be designed according to a single architectural style with matching materials, so that they create a unified image for this area.



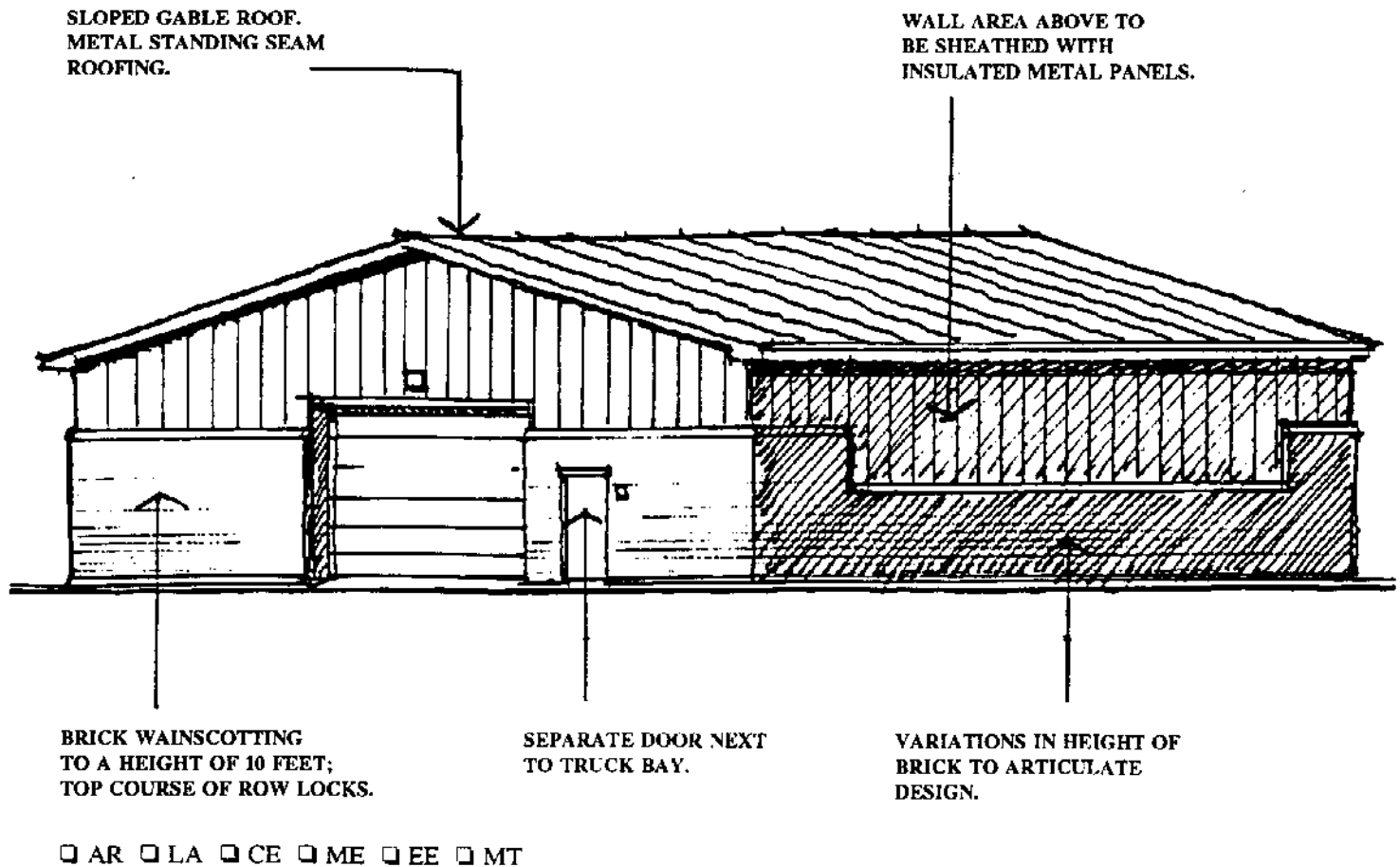
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Design Character

SS

Storage Buildings

Fort Monroe's architecture is distinguished by the prolific use of red brick. It is important that the proposed new warehouse structures continue this tradition with brick chosen to match the adjacent existing buildings.

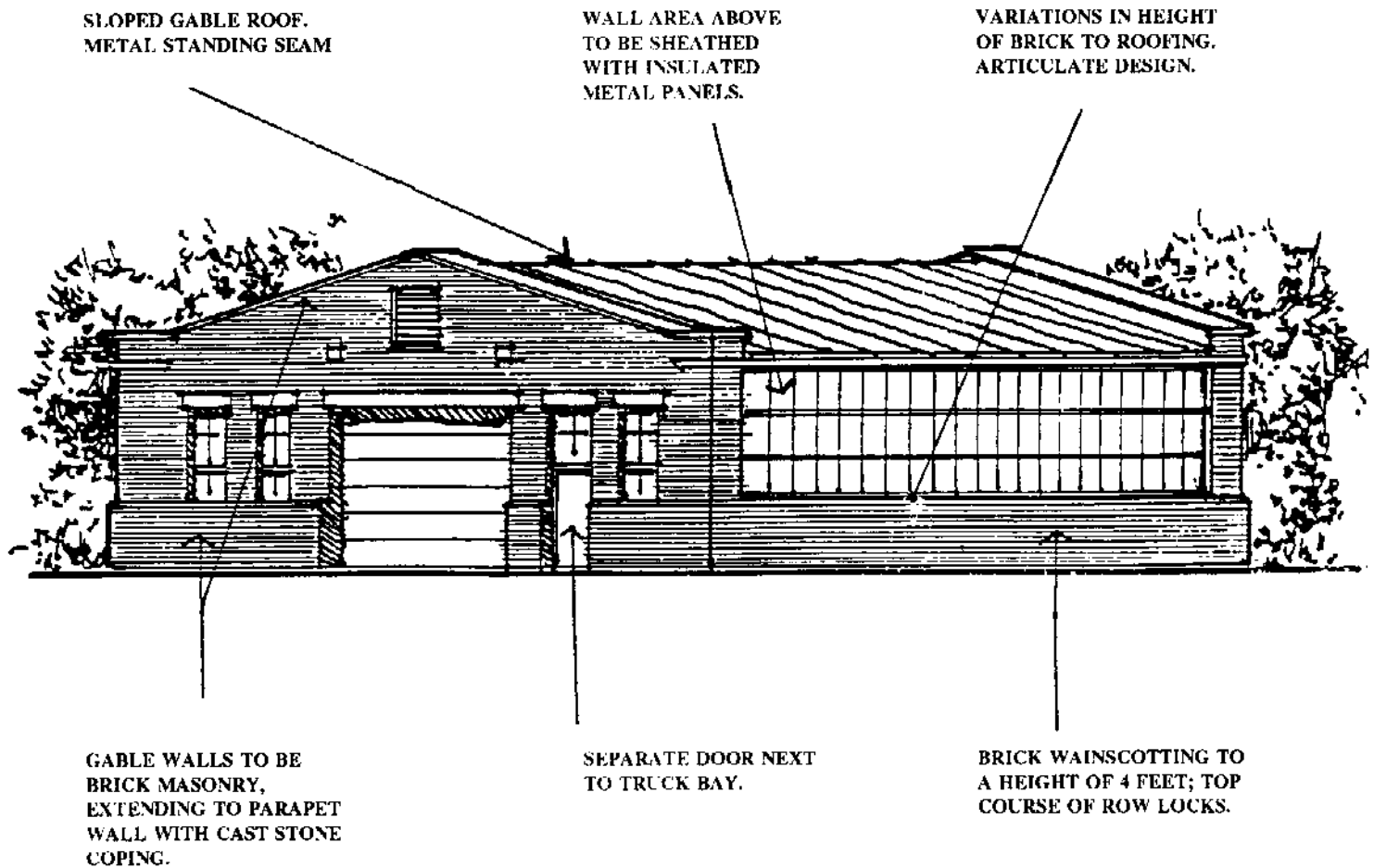


Design Character

GW VC SS

Storage Buildings

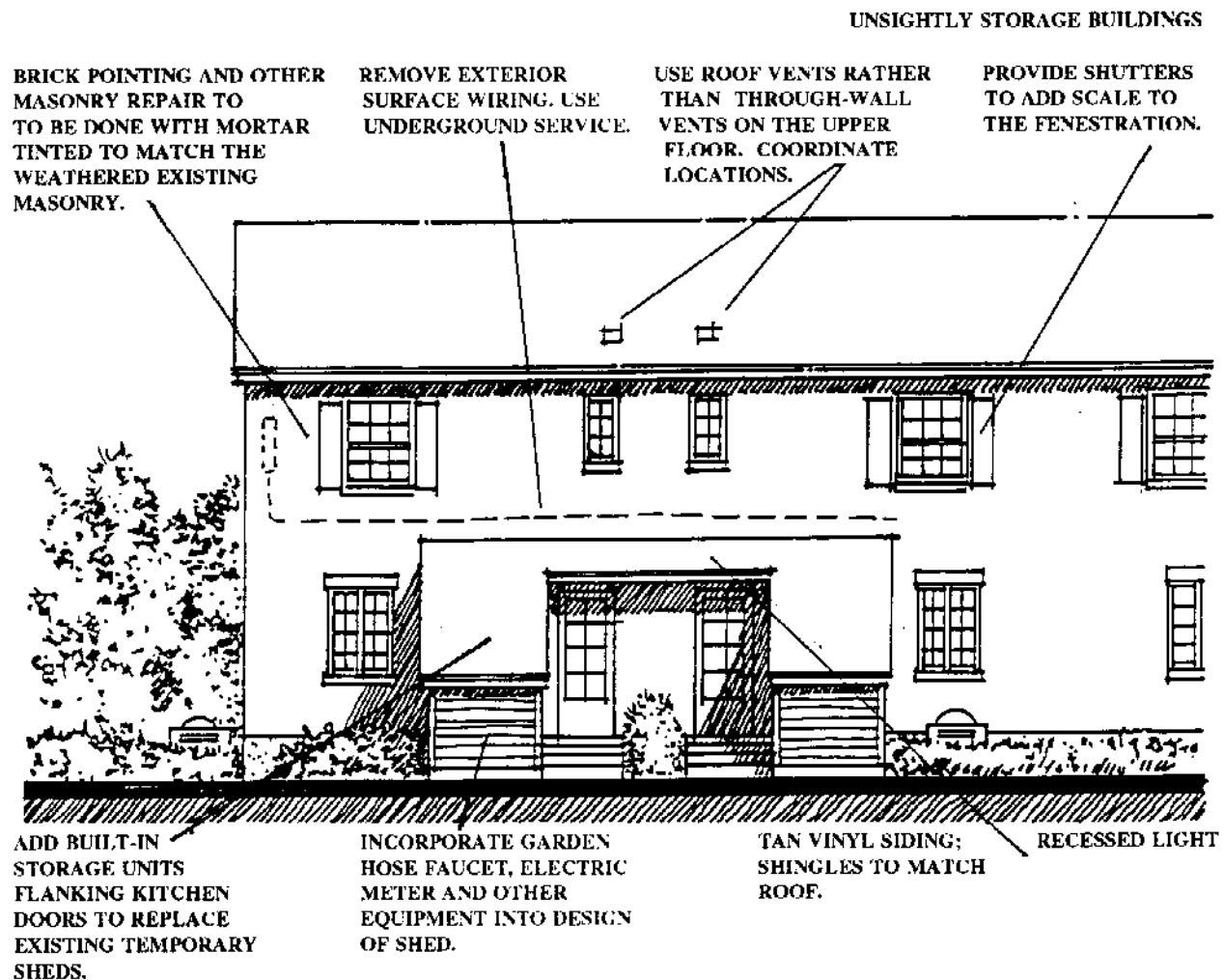
Fort Monroe's architecture is distinguished by the prolific use of red brick. It is important that the proposed new warehouse structures continue this tradition with brick chosen to match the adjacent existing buildings.



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Design Character**BH****Existing Wherry Family Housing**

An array of improvements are needed for the Bayfront Housing, some of which are now in the planning stage. As continuing maintenance and special projects afford opportunities for improvements, the following guide-lines must be applied.



□ AR □ LA □ CE □ ME □ EE □ MT

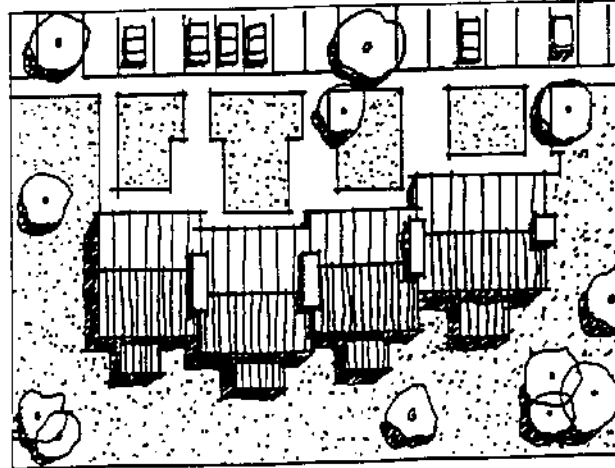
Design Character

CC BH OS

New Family Housing

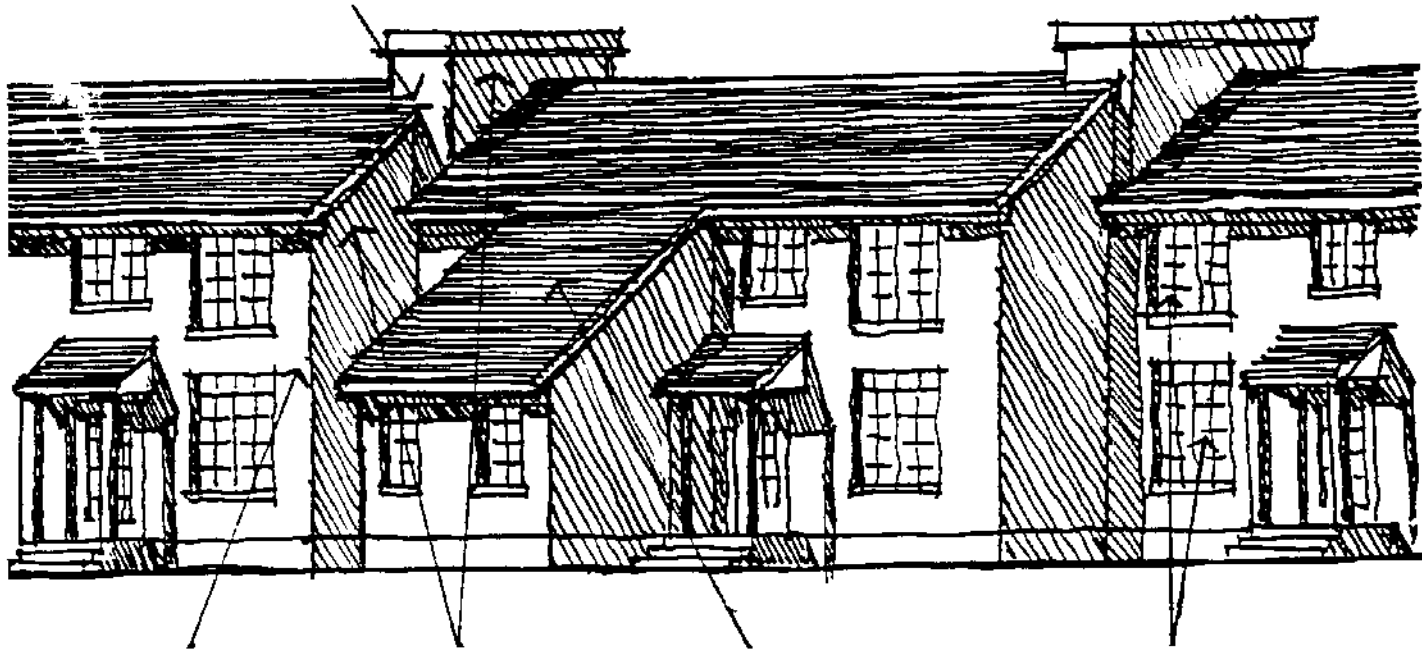
New family housing is to be designed to provide an individual "townhouse" image for each unit. This can be accomplished by stepping each pair of units forward or back 4 to 8 ft. to break the otherwise continuous plane of the facade and gable roof.

Recommended details are illustrated below.



FRAME AROUND METAL FLUES.
FINISH IN STUCCO WITH DETAILS
IMITATING MASONRY SHAPES.

CONCEPTUAL PLAN OF "STEPPED" FAMILY HOUSING UNITS (ROW OF 8 UNITS).



BRICK FRAME CONSTRUCTION

GABLE AND/OR HIPPED
ROOFS SLOPED 4:12, 18"
OVERHANG AT EAVES.

DOUBLE-HUNG
WINDOW SASH
WITH DIVIDED
PANES (6 OVER 6)

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Important Building Entrances

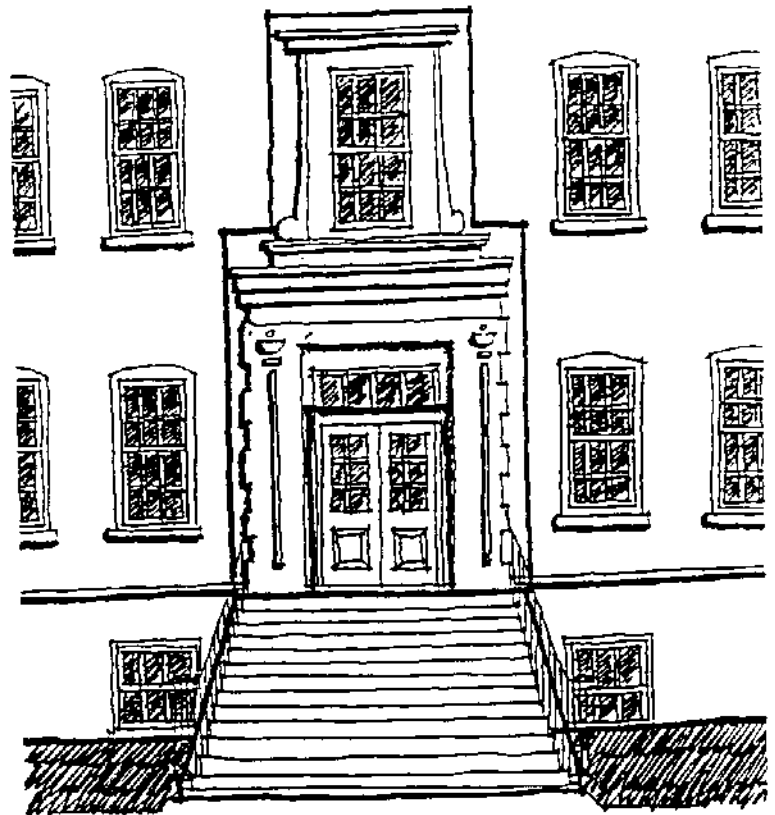
GW VC HF CC SS BH OS

Vertical Articulation

To emphasize important entrances, design special window(s) immediately above the entry doorway.

Limestone or cast stone is to be used (in certain zones: GW, VC, HF) in greater concentration at the main entrances to important buildings to emphasize their significance. Use pilasters, lintels, pediments, columns, entablatures, quoining, belt courses or other limestone/cast stone elements where appropriate.

Brick detailing may be used to extend the architectural expression of the first floor entry up into the second story, surrounding both the doorway and the window above. Several examples of this technique can be found in Fort Monroe's historic buildings.



BUILDING NO. 82 EXEMPLIFIES THE FORMAL ENTRY

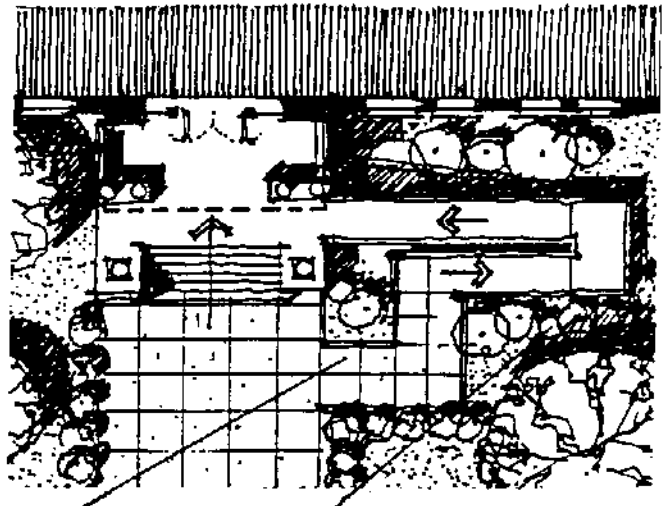
BUILDING NO. 133.

Ramps at Entrances

GW VC HF CC SS BH OS

Handicapped access ramps are to be placed to the side to allow for proper ramp distances without interrupting view of formal stairs and doorways.

Landscaping is to be used to screen the bulk of the ramp base, but allow visibility above railing height.



RAMP LEADS GRACEFULLY
FROM BASE OF STAIRS TO
ENTRY PORTICO.

LANDSCAPING AROUND
BASE OF RAMP, AND
BETWEEN RAMP AND
BUILDING.



CONCEPTUAL DRAWING ENTRANCE

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Alterations/Additions

GW VC HF SS CC BH OS

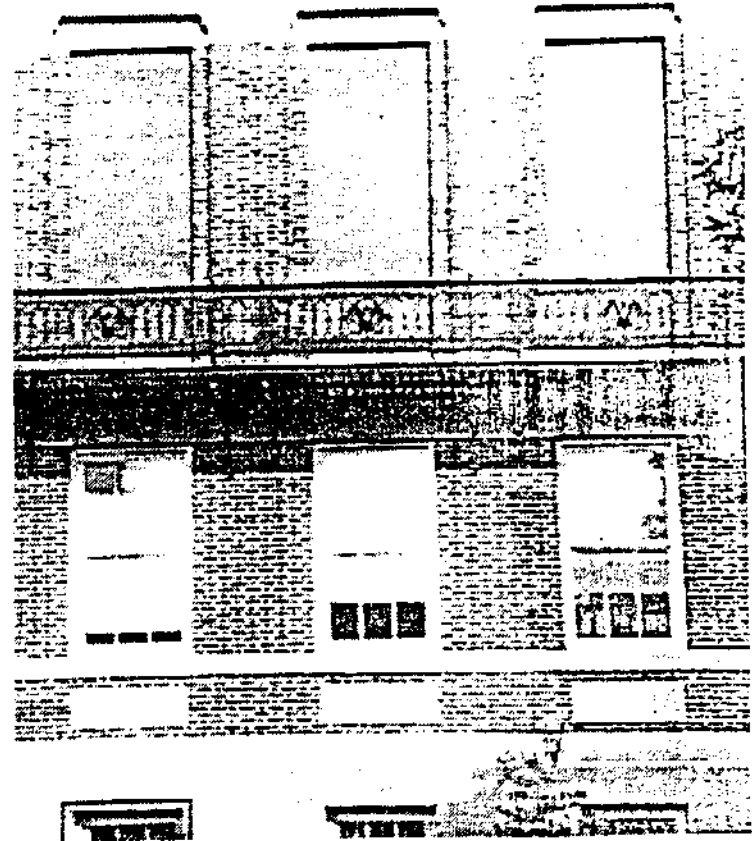
Securing Existing Openings

Where an existing brick masonry opening must be closed, allow the original profile of the opening to remain so that the overall effect of the building's fenestration will be preserved.

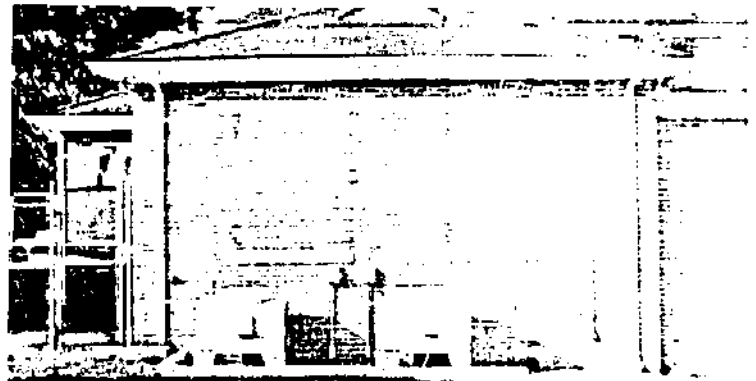
Do this by infilling with masonry to match the surrounding brick color, pattern, and coursing.

Infill masonry to be flush with or recessed back from surrounding wall plane.

Do not damage existing jambs, head or sill of masonry opening.



SECURED WINDOWS AT BUILDING NO. 133,
RECESSED TO MAINTAIN SHADOW LINES.



SECURED WINDOWS AT BUILDING NO. 192,
FLUSH WITH WALL PLANE.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

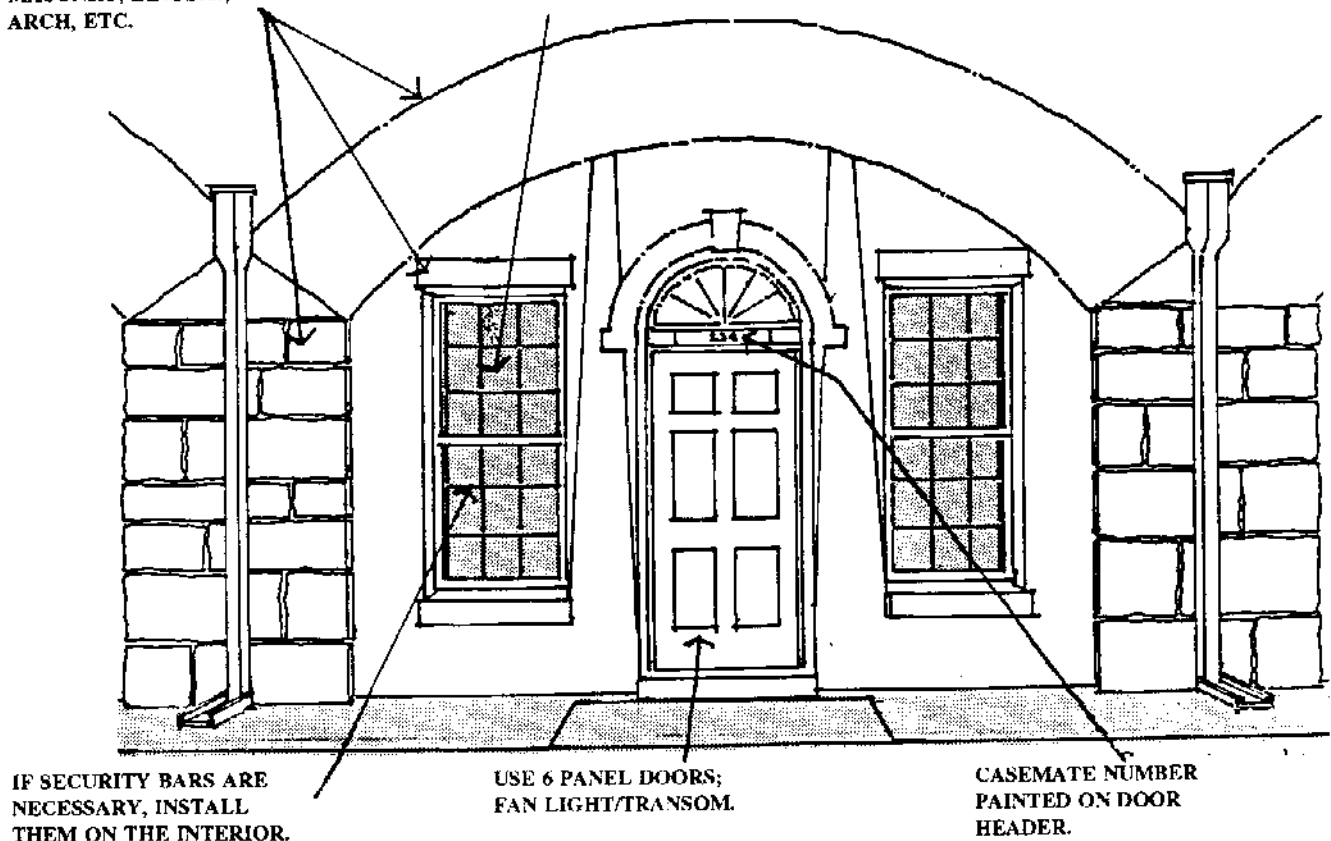
Alterations/Additions**HF****Historic Casemates**

Many of the casemates are now used for storage. The historic features of these casemates must be preserved and maintained whatever their current use. A center door flanked by matching double hung windows is the theme.

EXISTING CONDITION OF CASEMATES AT THE CHAPEL.

MAINTAIN/REPAIR
MASONRY, LINTELS,
ARCH, ETC.

USE 9 OVER 9 DOUBLE
HUNG WINDOWS



IF SECURITY BARS ARE
NECESSARY, INSTALL
THEM ON THE INTERIOR.

USE 6 PANEL DOORS;
FAN LIGHT/TRANSOM

CASEMATE NUMBER
PAINTED ON DOOR
HEADER.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Materials & Colors

GW VC HF CC SS BH OS

General Notes

Purpose

The purpose of this section is to set guidelines for color and material selections on new construction, renovations and maintenance work. These selections have been coordinated to establish a strong unified image for the post.

The materials and colors of the major permanent buildings already existing on post have been taken into consideration and in some cases are to be used as the basis for matching new materials. The specific buildings to be matched are cited in the following pages.

Historical Context

Material and color selections for renovations and additions to historic buildings are to follow the recommendations and requirements of the Dept. of the Army TM 5-801-2 *Historic Preservation Maintenance Procedures and Secretary of the Interior's Standards for Rehabilitation of Historic Buildings*. In particular, replacement or repair of exterior building components is to be made with materials which are historically authentic (such as wood windows, balustrades and porch columns). Where permitted by the references cited above, replacement components may be made of modern materials not previously available, where those materials can be made to closely match the appearance of the historically authentic material (such as aluminum trim moldings formed

to emulate wood). This may be desirable to minimize maintenance, improve insulation or increase the life of the building component.

Review Procedure

To ensure proper coordination, colors and materials are to be presented for review by both the project contracting officer's representative and the installation DPW (or representative). The presentation should be made by the project's designer (A/E) or builder (if project does not involve a design A/E). Samples of all major building materials to be used in the project must be presented together. Sizes of the samples must be large enough to give an accurate impression of their appearance and juxtaposition (what is seen next to what) in the completed project. For renovations, samples of major existing materials (such as brick masonry) should be included in the presentation. For large painting projects, a small portion of the total job (such as a single window) should be completed as a sample to be approved before final selection/approval.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Materials and Colors

GW VC HF

	Materials	Colors
Walls	Red brick, common size, running bond or common bond with soldier, sailor or rowlock courses for accent and trim.	Match building no. 37 for Command Center vicinity; match adjacent existing permanent or historic buildings in other areas. Mortar tinted to emulate historic masonry, e.g., Megusa Stoneset white sand.
Cornice & Trim	Stone for cornices, entablatures, coping, lintels, sills, column capitals and basements (i.e.: base of exterior wall below the main floor).	Natural limestone or cast stone to match limestone, e.g., Megusa Stoneset white sand.
	Wood trim for eaves, soffits, gutters, downspouts, etc.	Aluminum finish in white or off-white e.g., "Oyster" by Consolidated Aluminum, St. Louis, Missouri (314) 878-6950.
Doors & Windows	1) Use wood frame windows; and 2) Use wood doors.	Baked enamel or vinyl in antique white or oyster (see alum. color ref. above). Entry doors to match window sash (white/oyster) or accent colors: Burgundy (Sherwin-Williams BM1-32) or Deep Green (Sherwin-Williams BM40-8).
	Prefinish steel or aluminum entry doors.	
Roof	Slate, asphalt or asphalt/fiberglass blend regular or architectural shingles in standard width and length.	Color of shingle is to emulate the appearance of slate, which is a cool gray (tans and browns emulate the appearance of wood and should not be used). Cool gray color to match GAF "slate blend" or match roof of adjacent buildings.
Glazing	Insulated glass for windows, doors, clerestories, transoms and skylights.	Color of glass to be clear or tinted neutral gray or sepia tones. Glass color samples are to be reviewed with other building materials (including brick masonry to ensure coordination. No mirror glass, bronze reflective glass, or green glass is to be used.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Materials and Colors

CC OS

	Materials	Colors
Walls	Brick masonry, common size; running bond or common bond with sailor, soldier or rowlock courses for accent trim and band courses.	Match brick and mortar color to new Post Exchange building for all new structures south/east of Stilwell Drive. Use post-wide standard brick matching building no. 37 for areas north of Stilwell Drive. Match color of Monroe Club for new brick masonry structures in that vicinity (i.e. within 100 yards).
Cornice & Trim	Wood or prefinished aluminum flashing, coping and trim.	Match aluminum finish color of new Post Exchange building.
Doors & Windows	Wood or prefinished aluminum window frames and sash; prefinished steel entry doors.	Baked enamel metal finish in white or off-white, e.g., "Oyster by Consolidated Aluminum, St. Louis, Missouri.
Roof	Flat roofs (in Post Exchange vicinity) to be built up hot process asphalt type or membrane roofing system. In either case, gravel ballast is to be used; type & size to resist displacement by wind. No exposed black, white or reflective roof membrane surface which would be visible is permitted.	Color of gravel ballast is to be a warm light tan, matching the roof of building number 37. Flashing metal to match dark brown metal roofing of new Post Exchange.
	Sloped roofs for accent; standing seam metal roofing	Match color to metal roofing of new Post Exchange building.
Glazing	Insulated glass for windows, doors, clerestories, transoms and skylights.	Color of glass to be clear or tinted neutral gray or sepia tones. Glass color samples are to be reviewed with other building materials including brick masonry to ensure coordination. No <u>mirror</u> glass, bronze reflective glass, or green glass is to be used.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Materials and Colors**BH**

	Materials	Colors
Walls	Red brick, running bond.	Match brick and mortar colors to adjacent existing Wherry housing. Mortar color used for pointing and masonry repair is to be tinted to match color of existing surrounding mortar except where entire building is pointed.
Cornice & Trim	Painted wood or prefinished aluminum soffits, eaves, barge boards, gutters and downspouts.	Baked enamel metal finish in white or off-white, e.g., "Oyster by Consolidated Aluminum, St. Louis, Missouri.
Doors & Windows	Residential windows to be pre-finished aluminum or aluminum clad casement or extruded aluminum slider windows. Replacement sash to completely fill existing masonry openings (no filler panels). Vinyl-clad sash may be considered as an option.	Baked enamel or vinyl white or off-white; all units to match. Coordinate with entry door and other metal trim color.
	Residential entry doors to be pre-finished aluminum clad insulated doors. 6-panel style is recommended for the front door; 9-light with two panels beneath for rear door. Vinyl-clad doors may be considered as an option.	Baked enamel white or off-white; match window sash color.
Roof	Asphalt/fiberglass blend shingles in standard width and length.	Color of shingle is to emulate the color of slate, which is a cool gray (tans and browns emulate the appearance of wood and are not recommended). All roofing in BH Zone to be coordinated and uniform in color and texture.
Glazing	Insulated glass for windows, doors, clerestories, transoms and skylights.	Color of glass to be clear or tinted gray or sepia tones. Glass color samples are to be reviewed with other building materials including brick masonry to ensure coordination. <u>No mirror</u> glass, bronze reflective glass or green glass is to be used.

Materials and Colors

SS

	Materials	Colors
Walls	<p>Red brick, common size, running bond or common bond with soldiers, sailor or rowlock courses for accent and trim.</p> <p>Utility buildings may use prefinished steel, aluminum or vinyl-clad composite panels with vertical seams for upper portions of wall.</p>	<p>Match building no. 37 for Command Center vicinity; match adjacent existing permanent or historic buildings in other areas. Mortar tinted to emulate historic buildings in other areas. Mortar tinted to emulate historic masonry, e.g. Megusa Stoneset white sand.</p> <p>Baked enamel off-white or cream color.</p>
Cornice & Trim	<p>Limestone or cast stone for cornices, entablatures, sills, column capitals and basements (i.e. base of exterior wall below the main floor).</p> <p>Prefinished aluminum trim for eaves, soffits, gutters, downspouts, etc.</p> <p>Plaster soffits at porches, overhangs, and entry recesses.</p>	<p>Natural limestone or cast stone to match limestone, e.g. Megusa Stoneset white sand.</p> <p>Aluminum finish in off-white (see aluminum finish reference above). Where aluminum coping is used on brick parapet, color to match brick masonry, e.g. "Russett" by Consolidated Aluminum.</p> <p>Plaster color off-white.</p>
Doors & Windows	<p>Prefinished extruded aluminum or vinyl-clad window sash.</p> <p>Prefinished steel or aluminum entry doors.</p>	<p>Baked enamel window sash in off-white, e.g., "Oyster" by Consolidated Aluminum, St. Louis, Missouri.</p> <p>Entry doors to match window sash or accent colors: Burgundy (Sherwin-Williams BM 1-32) or Deep Green (Sherwin-Williams BM 40-8).</p>
Roof	Asphalt or asphalt/fiberglass blend shingles in standard width and length.	Color of shingle is to emulate the appearance of slate, which is a cool gray (tans and browns emulate the appearance of wood and should not be used). Cool gray color to match GAF "slate blend", or match roof of adjacent buildings.
Glazing	Insulated glass for windows, doors, clerestories transoms and skylights.	Color of glass to be clear or tinted neutral gray or sepia tones.

Section 3-3

Landscape

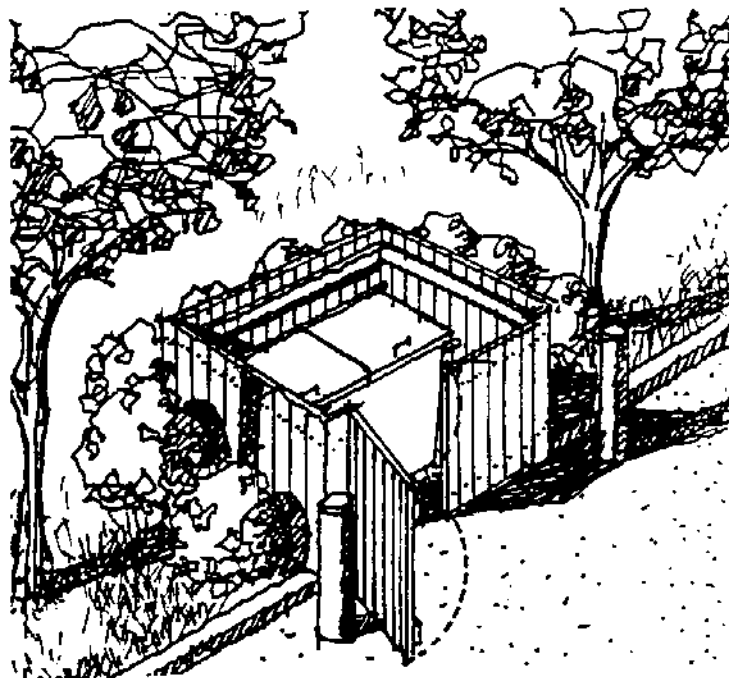
Screening Dumpsters

Wood Fencing

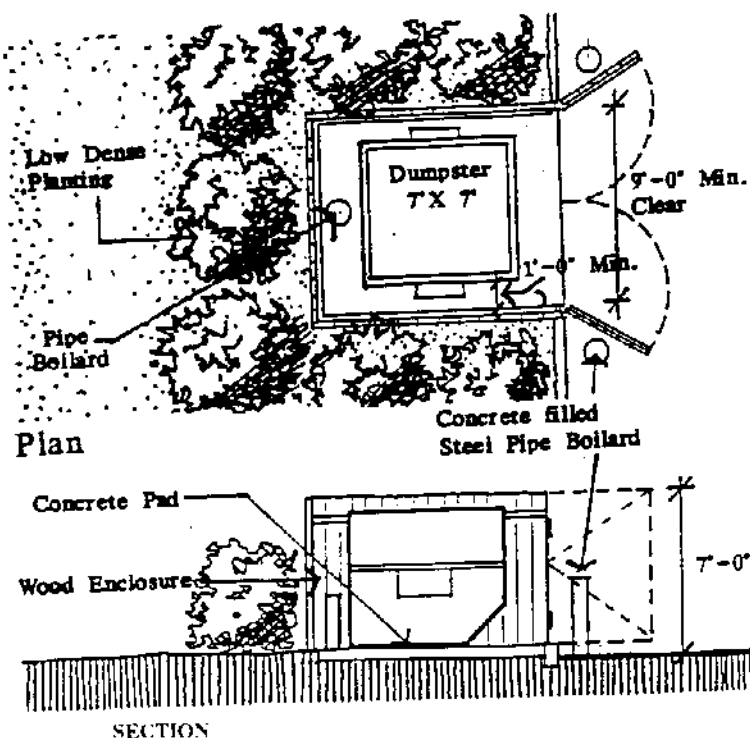
General Notes:

- * In areas of high visibility a wood screen wall is desired around dumpsters.
- * A 1" x 4" reinforced painted wood or pressure-treated wood screen is recommended (in a particular visual zone all dumpsters should have consistent finish).
- * Concrete filled pipe bollards are recommended to help protect the wood structure and concrete pad.
- * When a larger dumpster size is required, dimensions should be adjusted accordingly.
- * Low dense planting is recommended around enclosure as illustrated.
- * A hose bib should be located in close proximity to the dumpster enclosure for cleaning purposes.

HF CC BH OS



WOOD DUMPSTER ENCLOSURE


☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

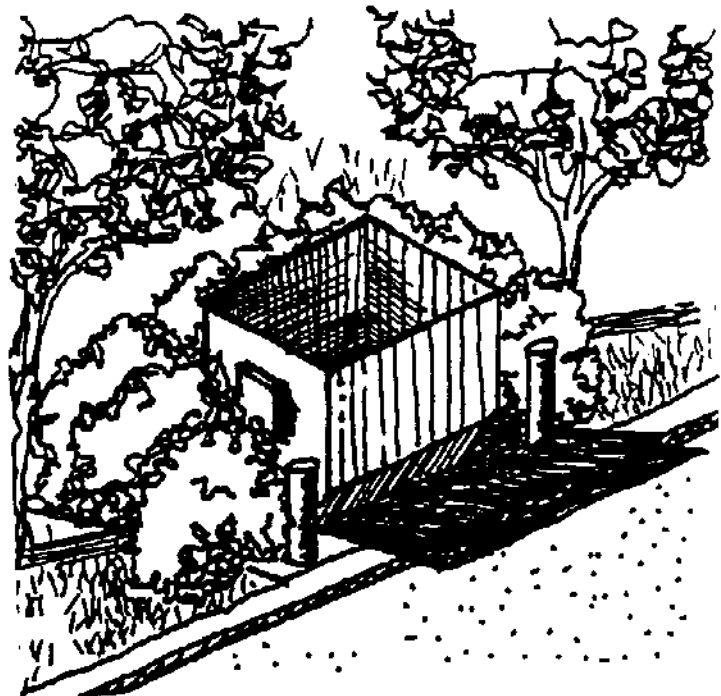
Screening Dumpsters

GW BF CC SS OS

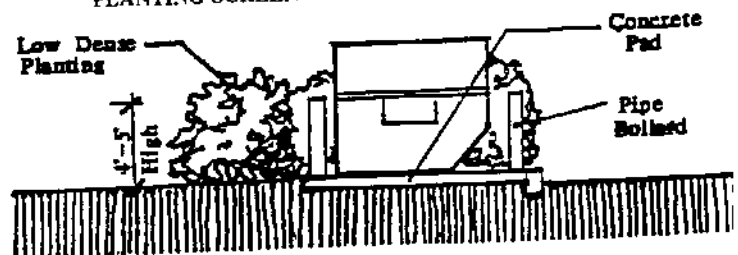
Standard Planting

General Notes:

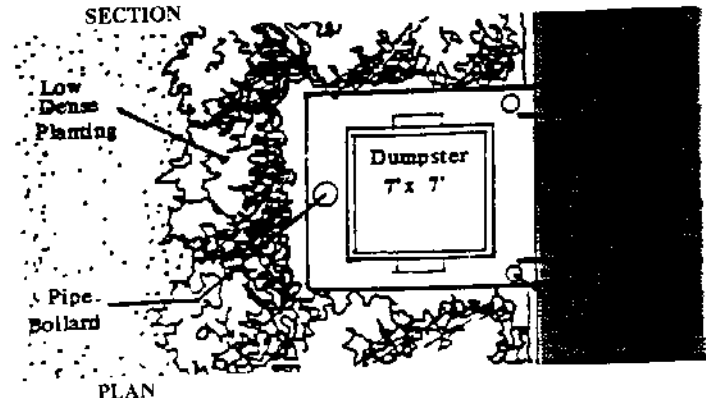
- * In areas of lower visibility a dense planting screen should be introduced to visually buffer the dumpster. See page 3-3-17 for recommended planting.
- * A concrete pad should be provided, as well as concrete filled pie bollards.
- * Planting screen should be 4'-5' high and consist of maintenance free, plant material including evergreens.
- * A hose bib should be provided in close proximity for cleaning purposes.



PLANTING SCREEN



SECTION



PLAN

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Locating Dumpsters

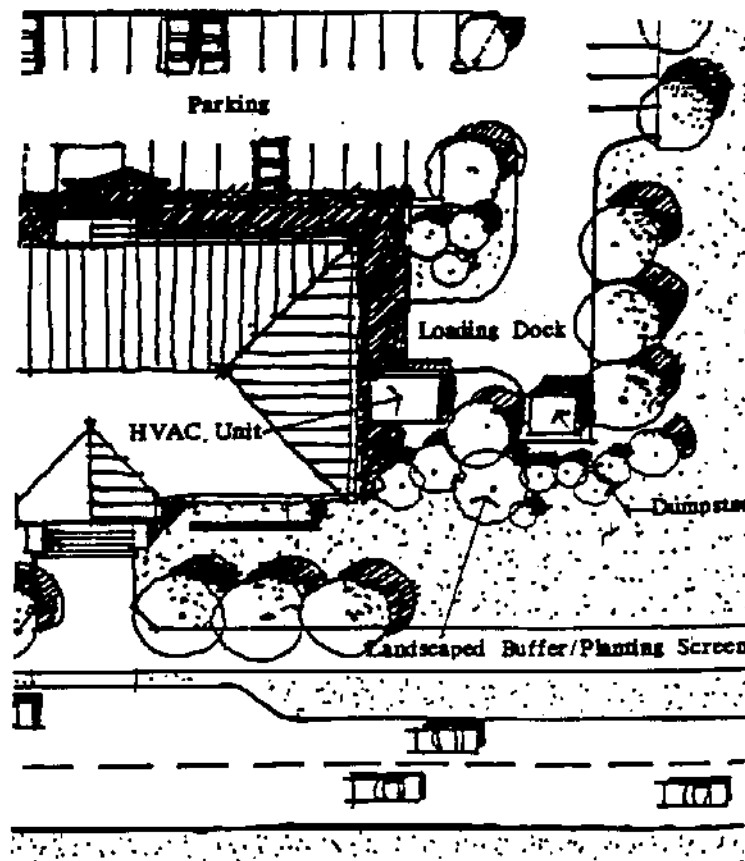
BH SS CC

General Notes:

- * Dumpsters should be located as required adjacent to loading docks. Access by truck (front end loader) should be readily available.
- * Screening as described on pages 3-3-17 through 3-3-25 should be incorporated where appropriate.
- * In areas of less visibility and in service areas, no structured screen is required.
- * A concrete pad and landscaped buffer should be incorporated. See page 3-3-17 for recommended planting.



DUMPSTERS MUST BE CAREFULLY
LOCATED TO MINIMIZE
VISIBILITY WHILE ALLOWING FOR



CONCEPTUAL PLAN - DUMPSTER
LOCATION

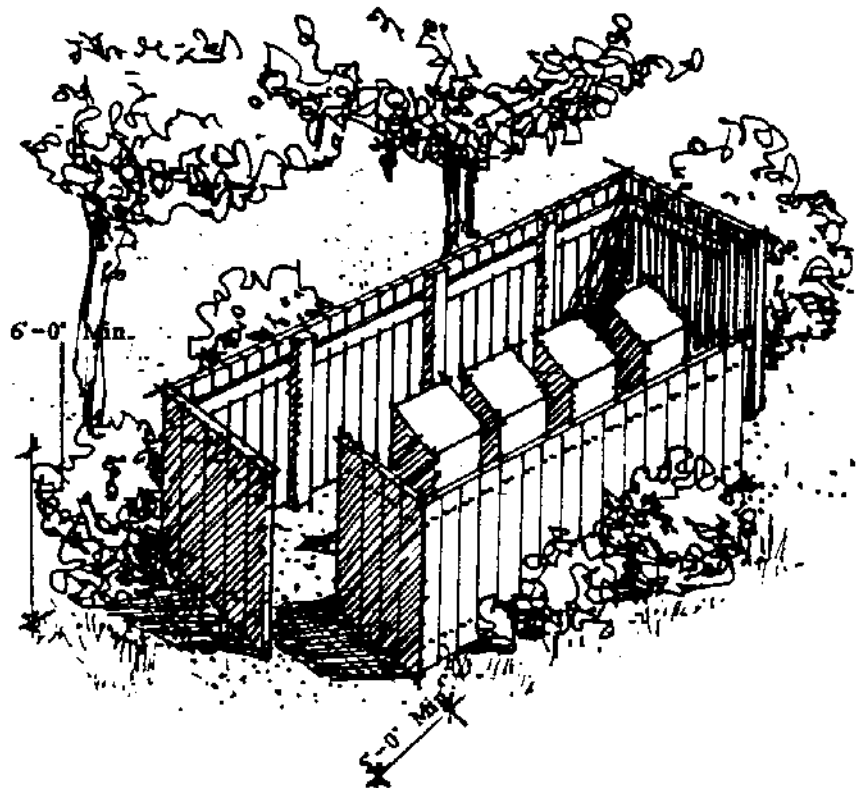
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Screening Remote Toilet Facilities

OS

General Notes:

- * Portable toilets should incorporate a wood screen wall.
- * A 1"x4" reinforced pressure-treated wood screen is recommended.
- * Sufficient space should be provided at entrance to enclosure wall for maintenance, cleaning, and removal (a minimum of 5' clear).
- * Gravel or sand should be utilized as ground surface within enclosure.
- * The portable toilets should be clustered in recreation areas as needed.



JAR ULA QCE QME QEE QMT

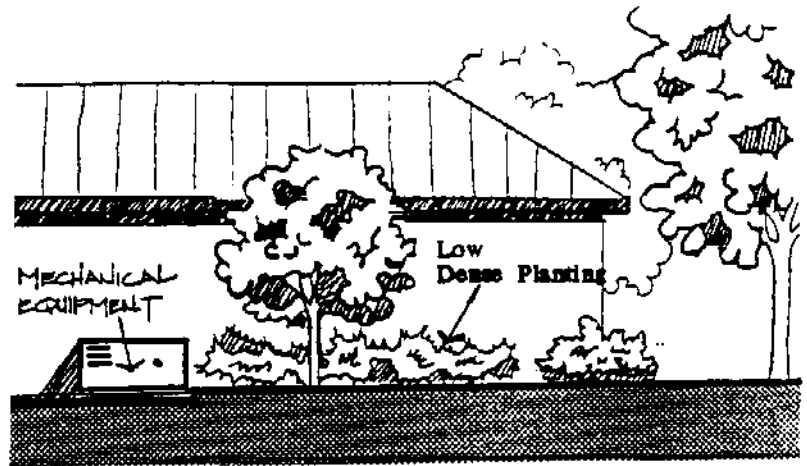
SCREENING OF PORTABLE
TOILETS

Screening Mechanical Equipment

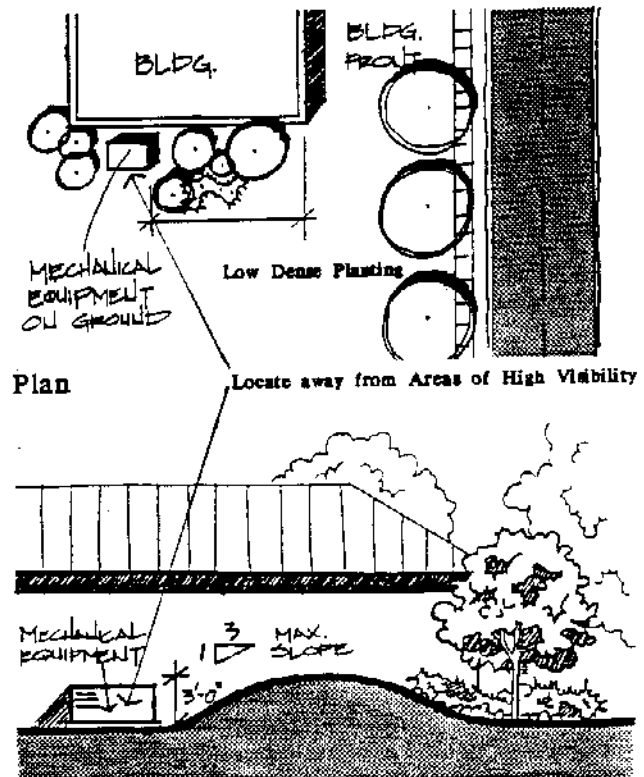
GW VC HF CC SS BH OS

General Notes:

- * TRADOC policy dictates that HVAC units should be located at grade on concrete pads adjacent to building wherever possible.
- * In areas of high visibility it is recommended that mechanical equipment should be located on top of building surrounded by a parapet or screen wall.
- * Where it is not possible to mount HVAC equipment on top of buildings, it should be located at grade away from entrances and areas of high visibility.
- * Units should be screened with low dense vegetation and earth berms if possible.
- * Sufficient space should be provided for air circulation and easy maintenance.



HVAC SCREENED BY PLANTING



BERM & PLANTING SCREEN

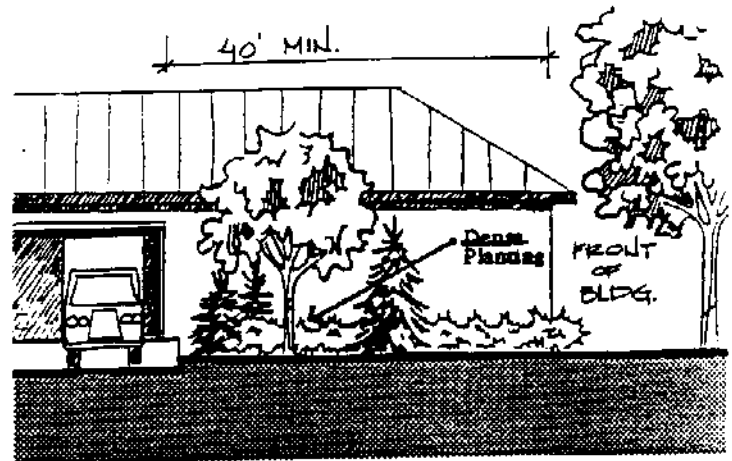
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Screening Loading Docks

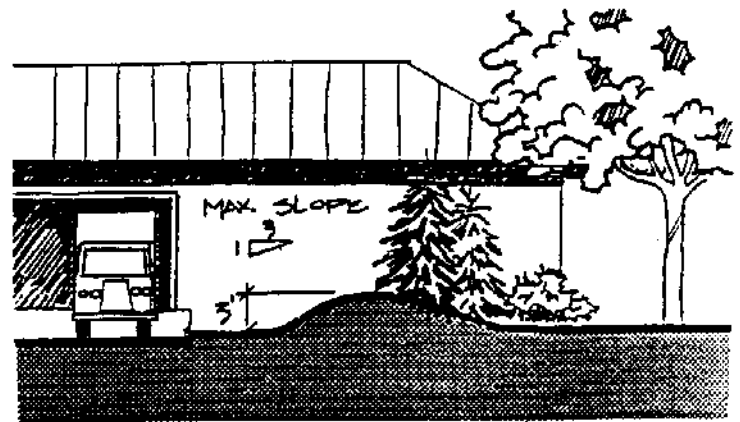
GW VC HF CC SS

General Notes:

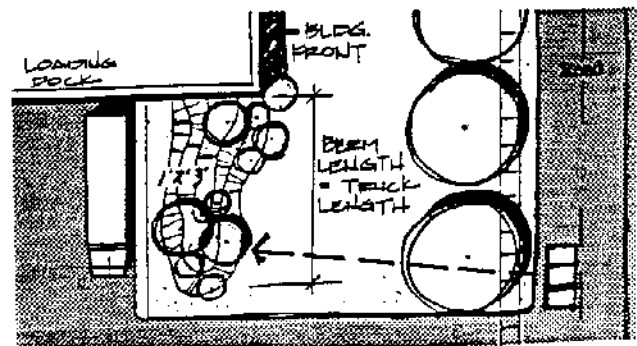
- * Where loading docks abut a roadway or area of high visibility, an effort should be made to screen the loading dock from view. This is only appropriate in areas between incompatible zone uses.
- * Landscaped buffer should include a variety of dense ever-green and ornamental planting, and should continue the length of the trucks using the dock. See page 3-3-17 for recommended planting.
- * In areas of extremely high visibility, a landscaped buffer may also be introduced to improve the visual screening.



LANDSCAPE VISUAL SCREENING



BERM & LANDSCAPED SCREEN SECTION



BERM & LANDSCAPED SCREEN PLAN

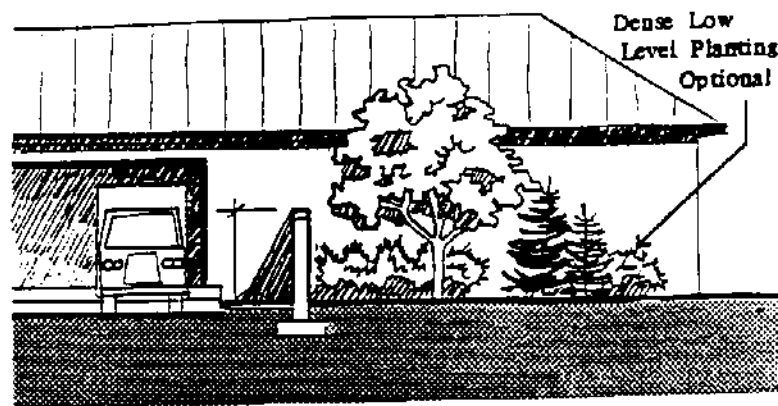
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Screening Loading Docks

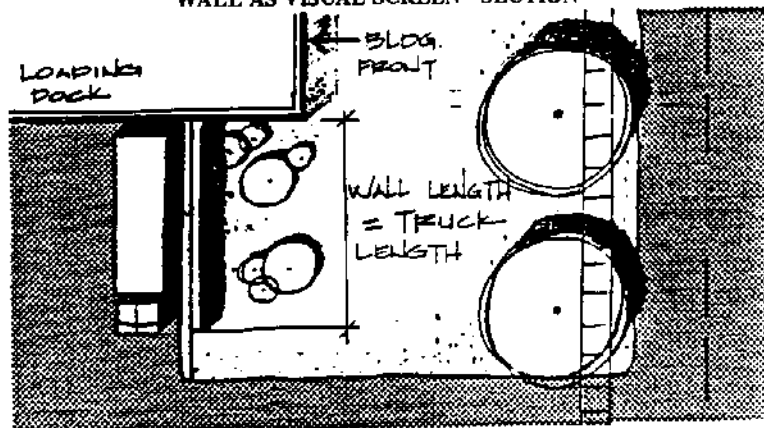
GW VC HF CC SS

General Notes:

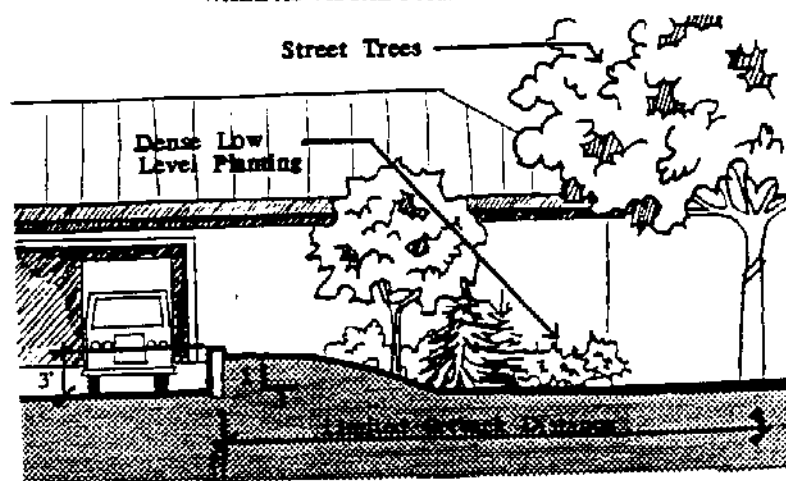
- * In areas of extremely high visibility a 5' high masonry (brick) wall should be introduced to screen view of service docks and other deleterious building uses. If building material is other than brick the screen wall should be constructed of the same or a compatible material. Dense low level planting is optional but desirable.
- * Where a limited setback distance exists a combination of a retaining wall (concrete or wood railroad tie) and landscaping can be incorporated. Berm should extend the length of loading dock area.



WALL AS VISUAL SCREEN - SECTION



WALL AS VISUAL SCREEN - PLAN



RETAINING WALL & BERM SCREEN - SECTION

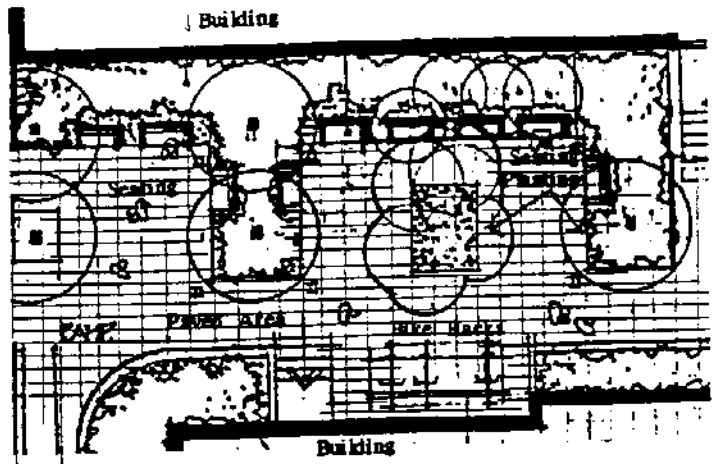
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Design Character

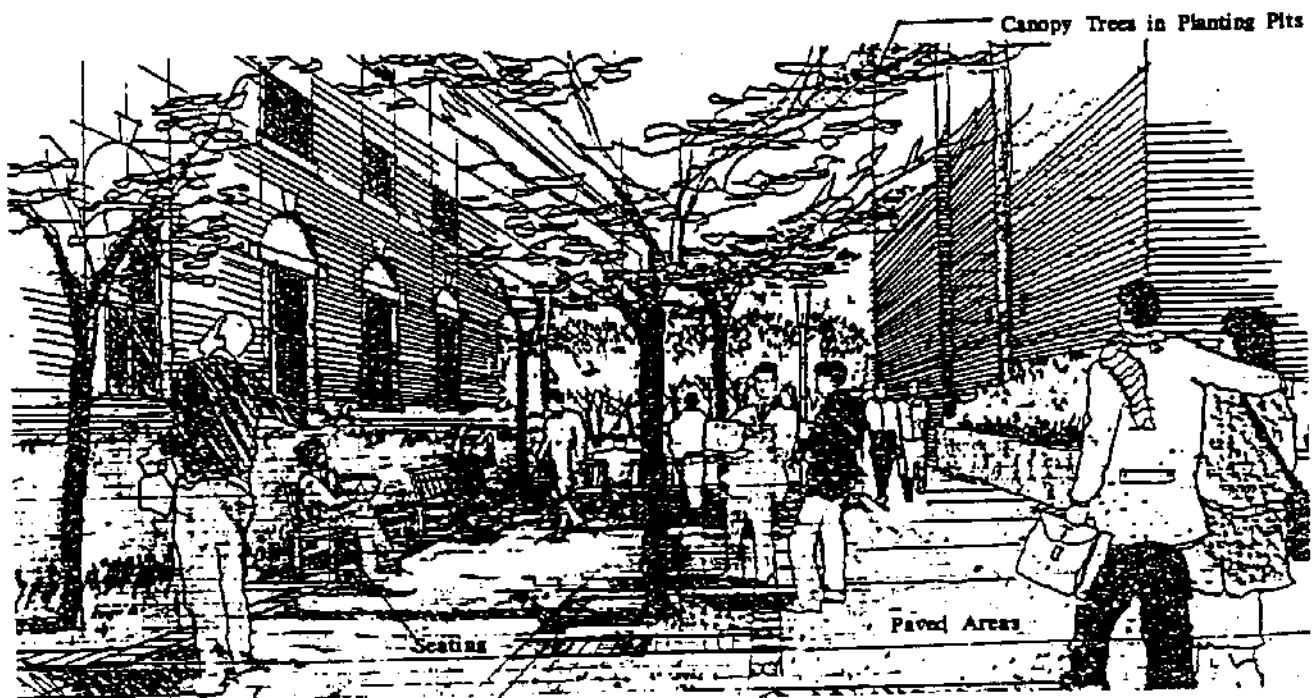
GW VC HF CC BH

Plazas & Courtyards**General Notes**

- * In areas of high visibility and intensive use, the spaces between buildings should be utilized as formal outdoor rooms.
- * Planting, paving and seating should be utilized to create pleasant outdoor spaces for personnel to interact and relax. See appropriate Design Criteria for recommended materials.



CONCEPTUAL PLAZA/COURTYARD PLAN



CONCEPTUAL VIEW OF PLAZA SPACE BETWEEN BUILDINGS

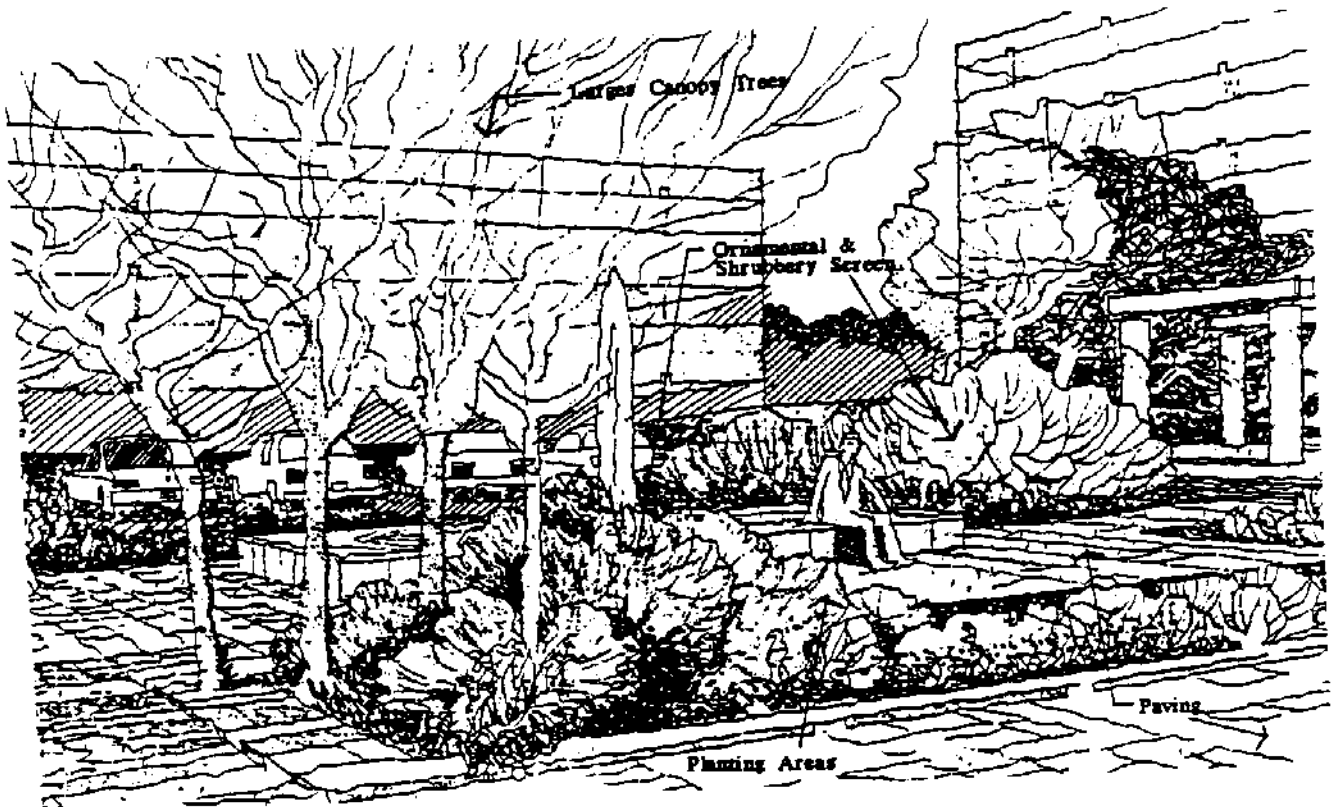
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Design Character

GW VC HF CC

Plaza & Courtyards**General Notes**

- * In high visibility and high activity areas formal plaza space should be created to provide usable outdoor space.
- * Planting should be used to define the edges of the space and break up large areas of paving. Larger canopy trees should be used to provide shade. See appropriate Design Criteria for recommended materials.



CONCEPTUAL SKETCH OF PLAZA

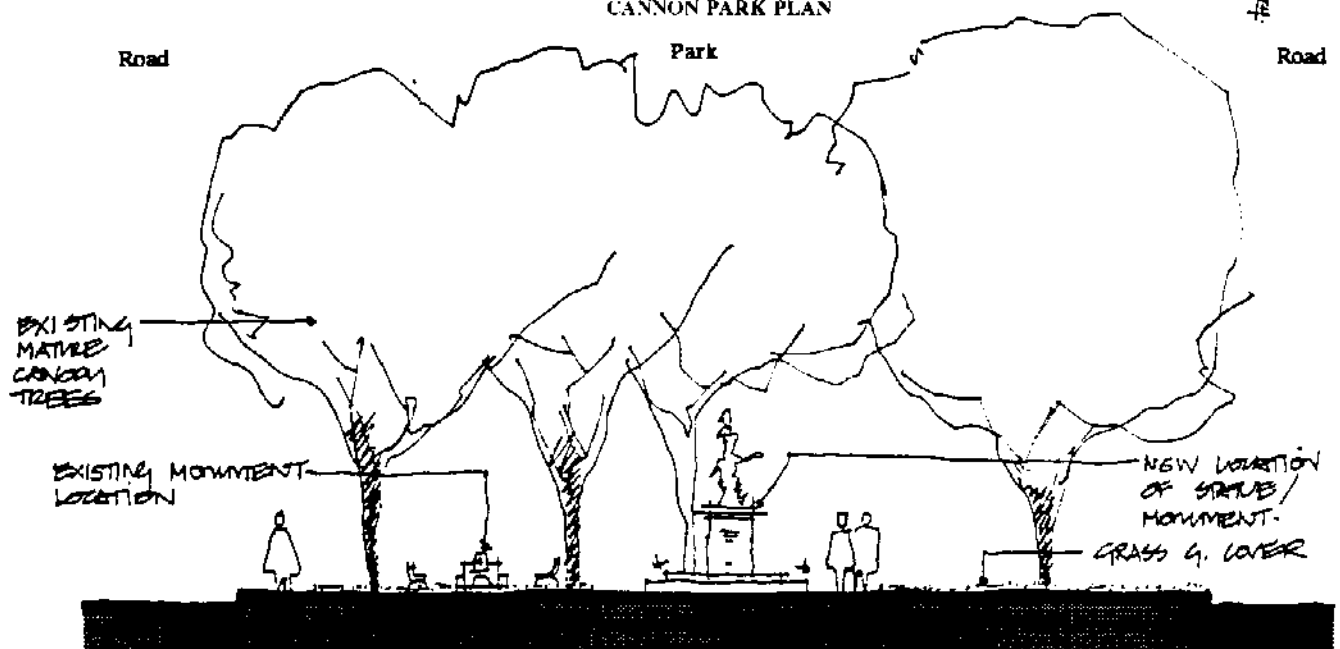
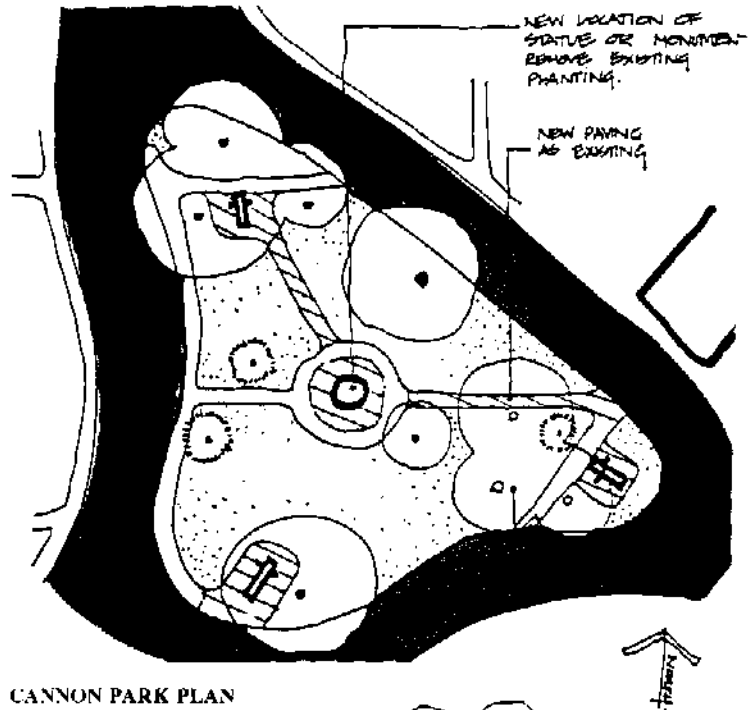
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Plazas & Courtyards - Cannon Park

VC

General Notes

- * Cannon Park represents the kind of special symbolic open space suited perfectly for the location of monuments, statuary, or military artifacts.
- ** Pavings, planting, and site furnishings should all contribute to a unified pleasant image in high-visibility areas such as this. See appropriate detailed Design Criteria.


☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Planting/Entrances to Important Buildings

GW VC HF CC OS

To create a formal approach suitable for an important command building, align the sidewalk to the axis of the main entry. Do not place signs, plantings or other fixtures along that axis. Allow the pedestrian to approach the doorway walking along the centerline. Following the recommendations below for planting, lighting, etc.

Plant large canopy trees away from building flanking sidewalk.

Choose species which will develop a canopy overhead and allow clear view of the building from eye level. See DC 3.



Foundation planting at base of building.

Sidewalk on axis with entry.

Locate ramp to one side leading to the top of the stairs.

Locate seating to the side; set back from traffic flow.

Pedestrian-scaled lighting flanking sidewalk.

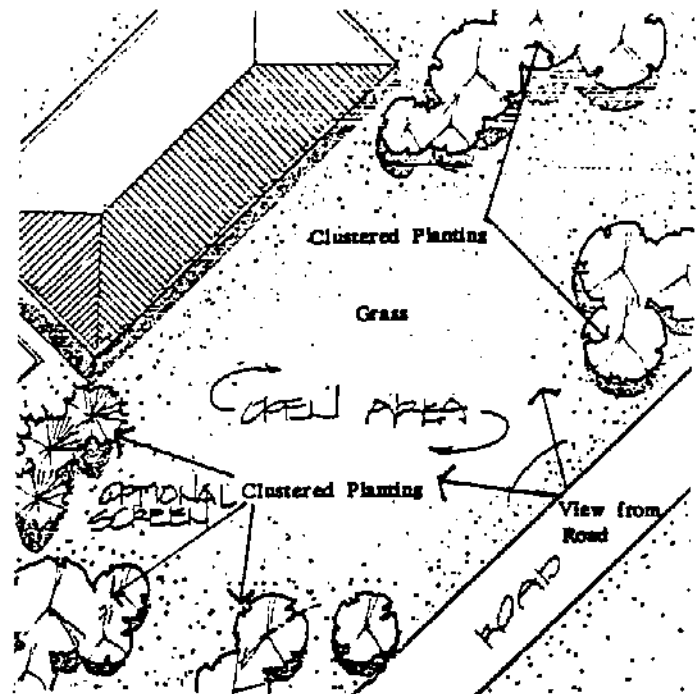
□AR□LA□CE□ME□JEE□MT

Landscaping in Proximity to Buildings

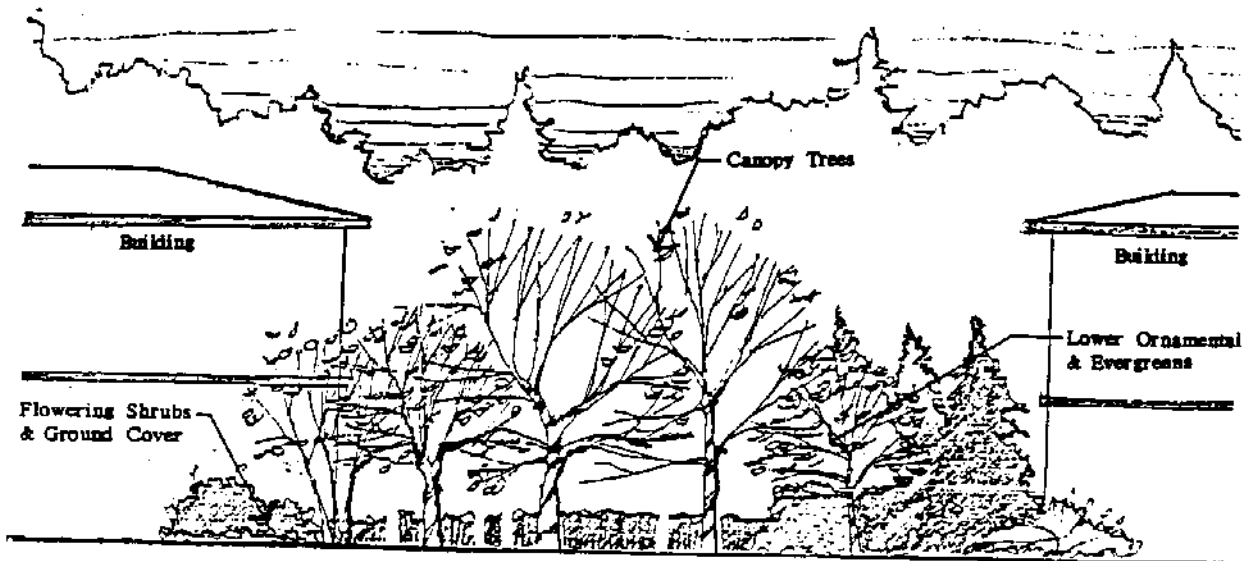
GW VC HF BH

General Notes

- * The spaces between buildings should be treated as landscaped outdoor rooms. A variety of open lawn areas and clustered planting should be used to compliment buildings, frame open areas, enclose views and add seasonal interest.
- * A mix of canopy trees and ornamental planting of varying sizes should be used. Group planting to form clusters with ornamentals in foreground, canopy and evergreen in background.



CONCEPTUAL PLAN LAYOUT



TYPICAL LANDSCAPING BETWEEN BUILDINGS.

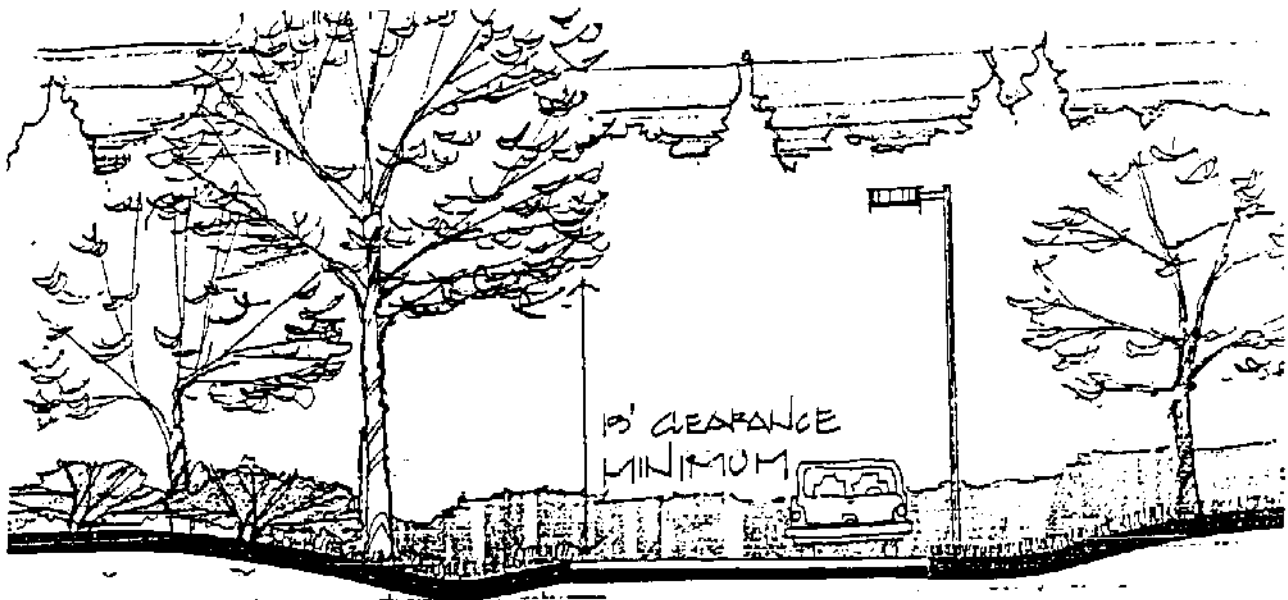
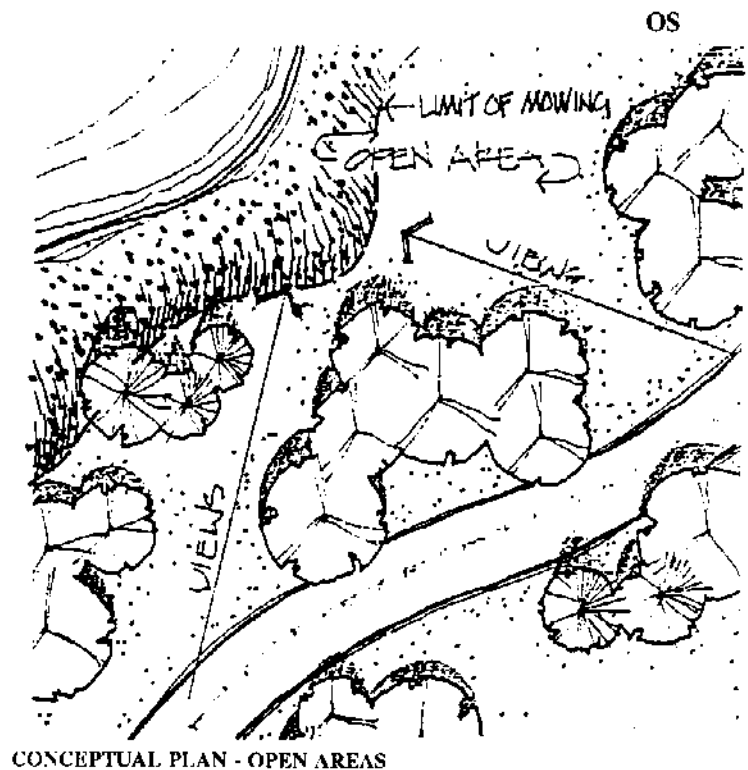
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Planting - General Open Areas

Plant canopy trees in informal groupings so that their mass helps define the edge of the open space and roadway corridor.

Spacing between the trees is to allow the canopies when fully grown to touch, but not crowd.

Live Oaks are recommended for the open space north of the Historic Fort.



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Planting Edge of Seawall

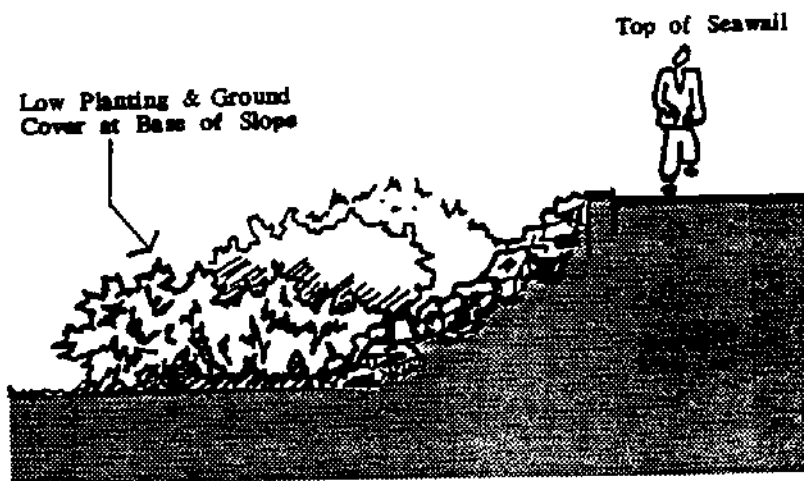
OS

General Notes

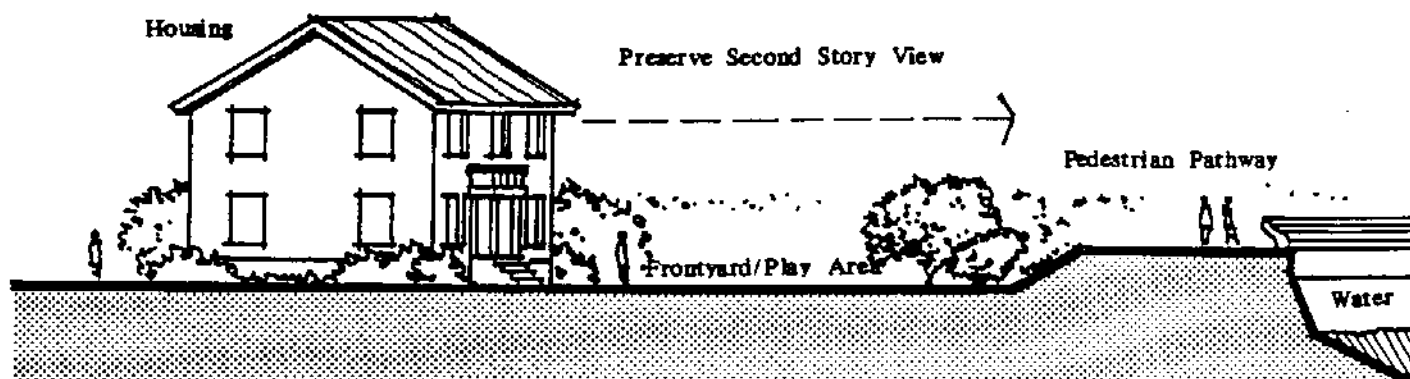
- * At housing areas the inner sloped face of the seawall is surfaced with asphalt. This provides a rather poor/harsh view from the nearby housing.
- * Salt-tolerant planting should be introduced at the base of the slope and ground cover introduced intermittently along the sloped edge. See DC 3.6 for planting recommendations.



VIEW OF UNSIGHTLY ASPHALT SLOPE



EDGE CONDITION


☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Historic Batteries

OS BH

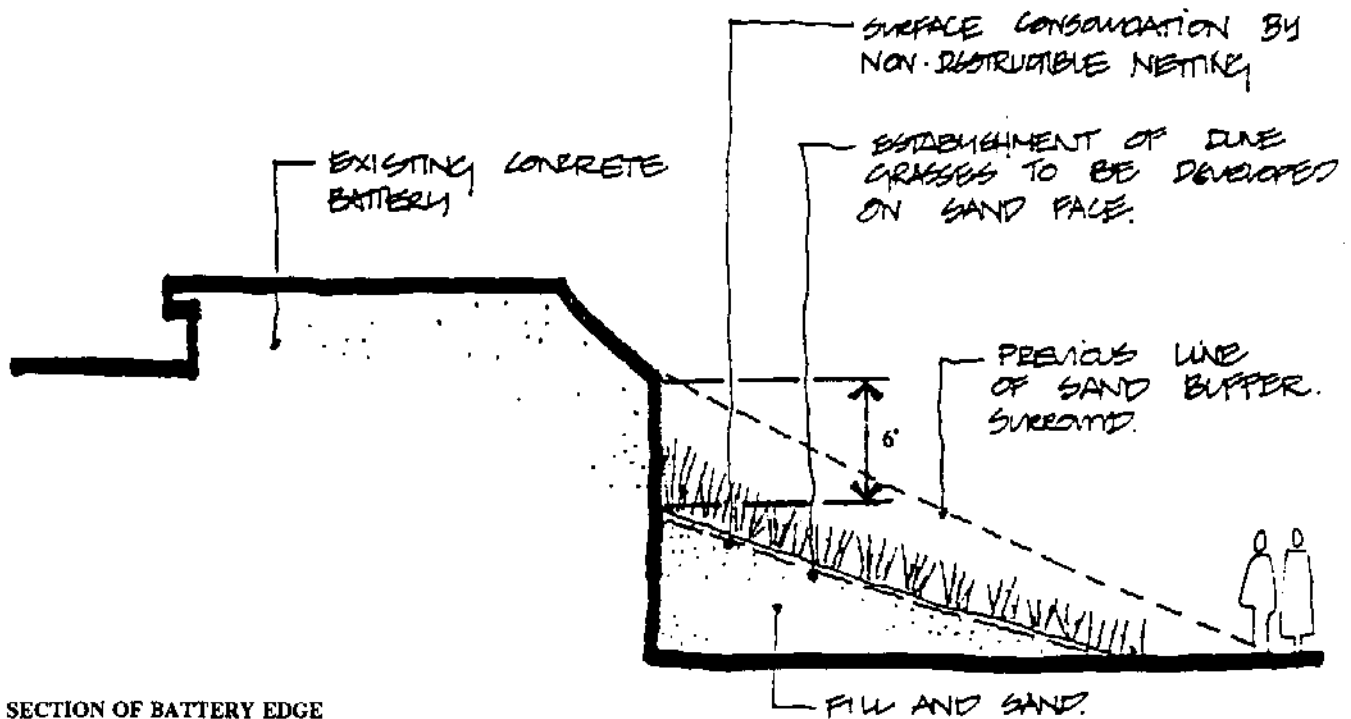
Fill material is to be partially restored at the base of the coastal batteries, so that the sheer face of concrete is partially covered over.

Indigenous grasses are to be planted and allowed to grow to full height. Mow on a seasonal basis to manage growth.

Access to top sides of batteries is to be prevented. Keep 6" below edge.



THE MASSIVE CONCRETE FACE OF BATTERY DERUSSEY WAS ORIGINALLY HIDDEN BY A SAND DUNE.

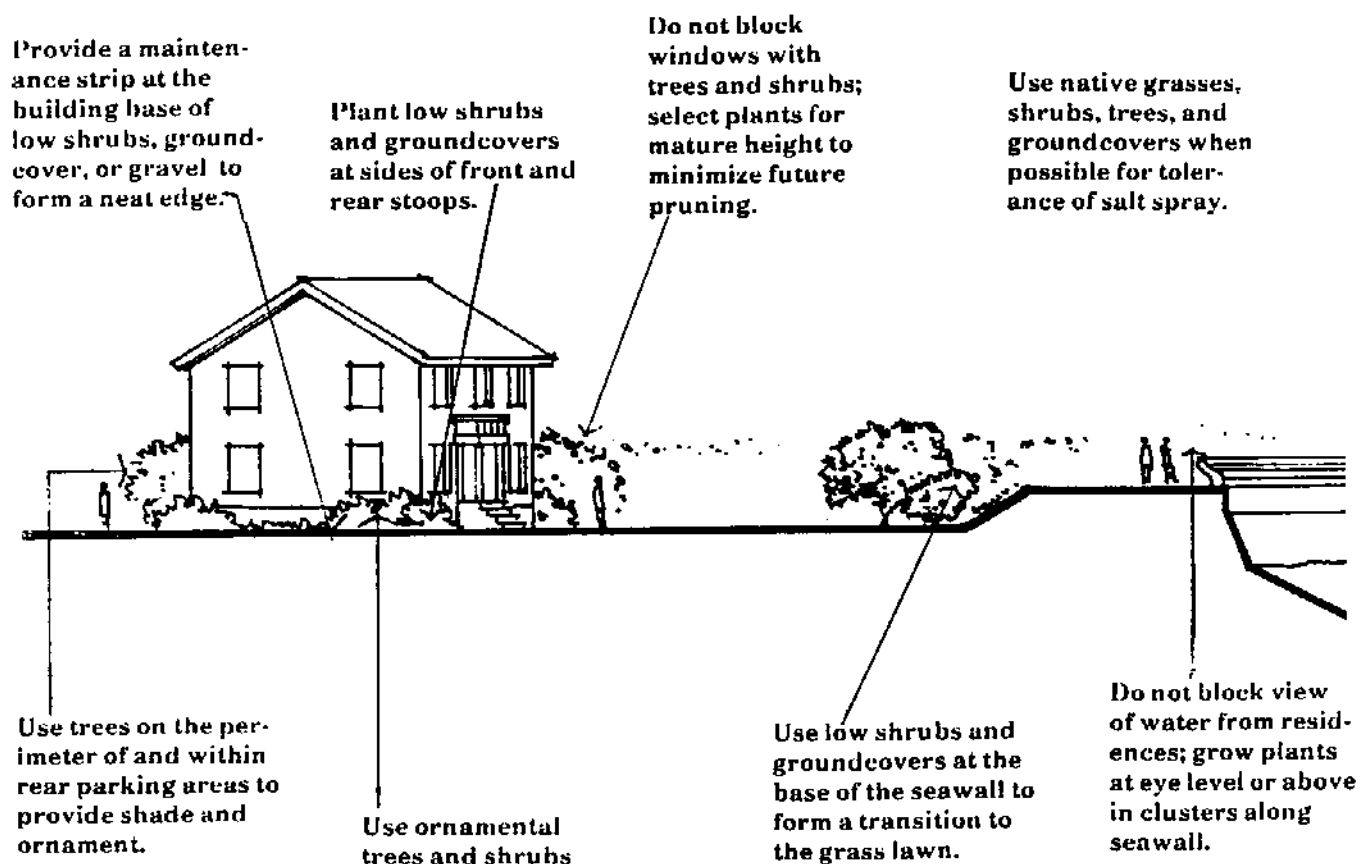


SECTION OF BATTERY EDGE

□ AR □ LA □ CE □ ME □ EE □ MT

Wherry Housing**BH****Planting & Maintenance**

Plantings should be selected for purposes of low maintenance, salt tolerance near the shore, and for general enhancement of the residential area. Care should be taken not to block views of the waterfront from the residences. Native trees, shrubs, and groundcovers should be used as much as possible, provided on the Shoreline Stabilization Plant list.



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Introduction - Plant Matrix

GW VC HF CC SS BH OS

Plant Matrix Introduction

The following plant list is not a complete selection of plantings suitable for use within the post, but serves as a general recommendation. The plantings will generally do well in this plant zone and have been known to be readily available. Substitutions may be made for reasons of cost, unavailability, or new information on plant diseases which may affect some of the species.

The plant list is arranged in three basic sections:

Developed Areas - Near buildings, roadways, and any area of heavy-to-moderate use.

Shoreline Stabilization - In natural areas at the water's edge (generally within the OS Zone).

Marsh Area - In the existing marsh on the Mill Pond side of the peninsula.

Subdivisions within each section includes trees, shrubs, and groundcovers.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Plant Matrix

GW VC HF CC SS BH OS

Botanical Name
Common Name

Type

Visual Zone

Appl.

Exp.

Soil

TREES

Acer palmatum
Japanese Maple

Acer rubrum
Red Maple

Cornus florida
Flowering Dogwood

Cornus kousa
Kousa Dogwood

Crataegus crusgalli
Cockspur Hawthorn

Fagus grandifolia
American Beech

Gleditsia triacanthos
Thornless Honey
Locust

Ilex opaca
American Holly

Lagerstroemia indica
Crape-myrtle

Liquidambar styraciflua
American Sweetgum

Liriodendron tulipifera
Tulip Tree

Magnolia grandifolia
Southern Magnolia

Magnolia virginiana
Sweetbay Magnolia

Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Street Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
•				•	•	•						•			•	•			•	•	
•				•		•		•		•					•				•		
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	•			•	•	•		•				•			•	•	•		•		

Plant Matrix

GW VC HF CC SS BH OS

Botanical Name
Common Name

Type

Visual Zone

Appl.

Exp.

Soil

TREESPicea abies
Norway SprucePinus strobus
White PinePinus taeda
Loblolly PinePinus thunbergii
Japanese Black PineMalus species
Crabapple SpeciesPlantanus acerifolia
London PlanePrunus serrulata
Kwanzan CherryPrunus sargentii
Sargent's CherryPrunus yedoensis
Yoshino CherryQuercus rubra
Red OakQuercus laurifolia
Darlington OakQuercus palustris
Pin OakQuercus phellos
Willow Oak

QAR QLA QCE QME QEE QMT

Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Street Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
	•				•	•			•				•		•			•			
	•			•	•	•			•				•		•				•		
	•	•				•		•	•				•		•				•	•	•
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	•			•	•	•	•	•		•	•		•		•				•	•	
	•			•	•	•	•		•	•		•		•	•				•	•	

Plant Matrix

GW VC HF CC SS BH OS

Botanical Name
Common Name

Type

Visual Zone

Appl.

Exp.

Soil

TREESQuercus virginiana
Live OakSalix babylonica
Weeping WillowTilia americana
American LindenTilia cordata
Littleleaf LindenZelkova serrata
Japanese Zelkova**SHRUBS**Abelia grandifolia
Glossy AbeliaAzalea species
Azalia speciesBuxus sempivirens
BoxwoodCamellia japonica
CamelliaForsythia fortunei
ForsythiaIlex aquifolium
English HollyIlex cornuta "Burford"
Burford Holly

AR LA CE ME EF MT

Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Street Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
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Plant Matrix

GW VC HF CC SS BH OS

Botanical Name
Common Name

Type

Visual Zone

Appl.

Exp.

Soil

SHRUBS

Ilex crenata
Japanese HollyIlex vomitoria
Yaupon HollyJuniperus conferta
Shore JuniperJuniperus horizontalis
Creeping JuniperCotoneaster dammeri
Bearberry CotoneasterLigustrum Indicum
Glossy PrivetMyrica cerifera
WaxmyrtleMyrica pennsylvanica
Northern BayberryRhododendron species
Rhododendron speciesRosa species
Rose speciesViburnum species
Viburnum species

Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Street Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
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☐AR ☐LA ☐CE ☐ME ☐EE ☐MT

Plant Matrix

GW VC HF CC SS BH OS

Botanical Name

Common Name

Type

Visual Zone

Appl.

Exp.

Soil

GROUNDCOVER

Ajuga reptans

Ajuga

Euonymus fortunei

Purple Wintercreeper

Hedera helix

English Ivy

Liriope species

Liriope

Pachysandra terminalis

Japanese Spruce

Vinca minor

Periwinkle

See Shrub List for Junipers and
CotoneasterSHORELINE
STABILIZATION

TREES

Ilex opaca

American Holly

Pinus taeda

Loblolly Pine

Pinus thunbergii

Japanese Black Pine

Quercus virginiana

Live Oak

□AR□LA□CE□ME□EE□MT

Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Sure Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
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Plant Matrix

GW VC HF CC SS BH OS

Botanical Name
Common Name

Type

Visual Zone

Appl.

Exp.

Soil

SHRUBS

	Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Street Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
<i>Gelsemium sempivirens</i> Yellow Jessamine		•	•							•					•	•	•	•			•	
<i>Ilex vomitoria</i> Yaupon Holly		•	•					•	•	•					•	•	•	•		•	•	•
<i>Juniperus conferta</i> Shore Juniper		•							•	•					•	•			•			•
<i>Myrica cerifera</i> Southern Waxmyrtle		•	•				•	•	•	•			•		•	•	•	•			•	•
<i>Myrica pennsylvanica</i> Northern Bayberry		•					•	•	•	•			•		•	•	•	•			•	•
<i>Rosa rugosa</i> Rugosa Rose	•	•					•	•	•	•			•		•	•				•	•	•
<i>Carex kobomugi</i> Japanese Sedge								•	•	•					•					•		
<i>Ammophila breviligulata</i> American Beachgrass			•				•	•	•	•					•							
<i>Uniola paniculata</i> Seaoats							•	•	•	•					•							
<i>Panicum amarum</i> Bitter Panicum			•				•	•	•	•					•							
<i>Spartina patens</i> Saltmeadow Cordgrass			•				•	•	•	•					•							

AR LA CE ME EE MT

Plant Matrix

GW VC HF CC SS BH OS

Botanical Name
Common Name

Type

Visual Zone

Appl

Exp

Soil

MARSH AREA

TREES

Alnus serrulata
Tag AlderAmelanchier canadensis
Shadbush
ServiceberryCrataegus species
Hawthorn species

SHRUBS/GROUNDCOVER

Anisotichus capreolata
Cross VineAronia arbutifolia
Red ChokeberryCynodon dactylon
Bermuda GrassCampus radicans
Trumpet VineClethra alnifolia
SummersweetEragrostis species
LovegrassGaylussachia species
HuckleberryIlex verticillata
Winterberry Holly

Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Street Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
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□AR□LA□CE□ME□EE□MT

Plant Matrix

GW VC HF CC SS BH OS

Botanical Name
Common Name

Type

Visual Zone

Appl.

Exp.

Soil

SHRUBS/GROUNDCOVER

Ilex vomitoria

Yaupon Holly

Lolium species

Ryegrass

Lonicera japonica

Japanese Honeysuckle

Myrica cerifera

Southern Waxmyrtle

Polygonum cuspidatum

Mexican Bamboo

Phyllostachys aurea

Golden Bamboo

Rosa winchuriana

Trailing Rose

Rhus glabra

Sumac

Symphoricarpos vulgaris

Indian Current

Spartina patens

Saltmeadow

Cordgrass

Viburnum species

Viburnum species

Deciduous	Evergreen	Indigenous	GW	VC	HF	CC	SS	BH	OS	Shade	Street Tree	Ornamental Interest	Screen	Erosion Control	Sun	Partial Shade	Shade	Dry	Moist	Adaptable	Salt Tolerant
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Paving Material	Application	GW VC HF BH CC OS SS Installation/Finish
Brick Pavers	Walkways (GW, VC, HF)	Recommended pattern -- running board for general use.
	Plazas/Courtyard (GW, VC, HF, CC)	Mortar joints-heavy pedestrian use
		Sand-swept joints -- light pedestrian use
Concrete Pavement	Walkways (GW, VC, HF, SS, CC, BH, OS)	Broom finish or aggregate surface * (brown/tan aggregate) for non-slip finish, with smooth trowel edging within scoring.
	Plazas/Courtyards (CC)	Brick edging is desirable in highly visible and historic areas.
	Service Areas/Truck Dock (GW, VC, HF, SS, CC)	Brick edging and striping is desirable in highly visible areas. Use appropriate thickness. Light broom finish for non-slip surface.
Unit Pavers	Plazas/Courtyards (VC, CC)	Pressed concrete or asphalt pavers. Optional brick edging to match adjacent buildings.
Stone	Whenever stone pavement presently exists (i.e. top of rampart). (HF)	Loose slate or granite pavers set in sand top of rampart. Install to match existing pavement.
Asphalt Pavement	Jogging/Pedestrian Pathways (GW, SS, CC, BH, OS)	Use light colored aggregate in mix to differentiate from roadway pavement.
	Roadways/Service Areas (GW, VC, HF, SS, CC, BH, OS)	Use appropriate thickness for heavy vehicles.

Section 3-4

Site Furnishings

Site Furnishings Matrix

GW VC HF CC SS BH OS

The following matrix is a summary of the site furnishings to be used on post within the appropriate visual zones. The three columns contain the following information: Item (general description), visual zone (which visual zones each furnishing is used within), application (specific application within visual zone). Though there may be exceptions to application and visual zone, the matrix may be used as a general guide, followed by more detailed information on selection and location in each particular application.

Item	Visual Zone							Application
	GW	VC	HF	SS	CC	BH	OS	
1. Benches/Tables								
A. Cast iron/wood-historical style	●	●	●					1.A. High visibility areas within historic zones
B. Wood-curved Form with metal supports	●				●	●	●	1.B. General use through other visual zones and within less visible historic areas
C. Backless wood bench, metal supports			●	●			●	1.C. Other less visible areas
D. Picnic table							●	1.D. Recreational areas
E. Recreational area bench							●	1.E. Recreational and sports fields
2. Ballards								
A. Cast iron - black finish, articulated	●	●	●					2.A. Highly visible historic areas
B. Wood								2.B. Recreational and housing areas
C. Conc. filled pipe - painted black	●		●	●				2.C. Service areas and less visible areas

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Site Furnishings Matrix

GW VC HF CC SS BH OS

Item	GW	Visual Zones VC	HF	SS	CC	BH	OS	Application
3. Trash Receptacles								
A. Circular, stainless steel, installed at grade	●	●	●		●			3.A. Areas of extreme high visibility
B. Circular perforated steel, pole mounted	●	●	●	●	●	●	●	3.B. Other areas, more functional requirement
4. Fencing/Railings								
A. Traditional - Tubular steel picket w/black finish	●	●	●	●	●			4.A. Secured areas of high visibility
B. Traditional wood slat (white or park stain)		●	●			●		4.B. Historic and residential areas
C. Cast stone, tubular steel & picket w/black finish	●	●	●					4.C. High visibility areas along water's edge and moat perimeter.
D. Security - Chain link w/black vinyl coatings				●	●		●	4.D. Secured areas of low visibility
5. Phone Booths								
A. Cylindrical Kiosk - black color	●	●	●		●			5.A. Consolidate in high activity areas
6. Bus Shelters								
A. Aluminum/wood shelter with flat roof - black color	●	●	●	●	●	●	●	6.A. General Use - Minimize location to a few high activity areas
7. Flagpoles								
A. Standard - Stainless steel	●	●	●		●			7.A. Ceremonial areas and activity areas

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Site Furnishings Matrix

GW VC HF CC SS BH OS

Item	Visual Zone							Application
	GW	VC	HF	SS	CC	BH	OS	
8. Drinking Fountain								
A. Standard cast iron fountain	●	●	●					8.A. Historic and highly visible areas
B. Handicap pedestal-mounted fountain	●	●	●	●	●	●	●	8.B. Training and recreational areas near seating
C. Standard spigot Utilitarian type				●	●	●	●	8.C. As required
9. Bicycle Racks								
A. Simple ribbon rack - brushed metal	●	●	●	●	●	●	●	9.A. Locate at building entries out of main circulation patterns.

Furnishing Selection

GW VC HF CC SS BH OS

General Notes

The following descriptions identify each furnishing to be used within each visual zone. Though it is not required that the specific manufacturer be used, if substitutions are made the furnishings selected should match the specifications of the model shown as closely as possible.

The section is arranged in the following way:

- Item: (Generic description of furnishing to be used)
- Material: (of the major components)
- Color: (of the major components)
- Form/Style: (General Description)
- Application: General location and specific visual zones
- As Manufactured
by or equal to: Selected manufacturer or first choice of manufacturers
- Model no: Most current model number available at the time of the brochure printing



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Furnishing Selection

GW VC HF CC SS BH OS

Benches/Tables

- 1.A. Item Historical style bench
Material Cast iron arms and supports, wood seat

Color Natural wood color with clear finish; black arms and supports

Application Highly visible seating areas within historic zones

Zones: VC, HF, GW

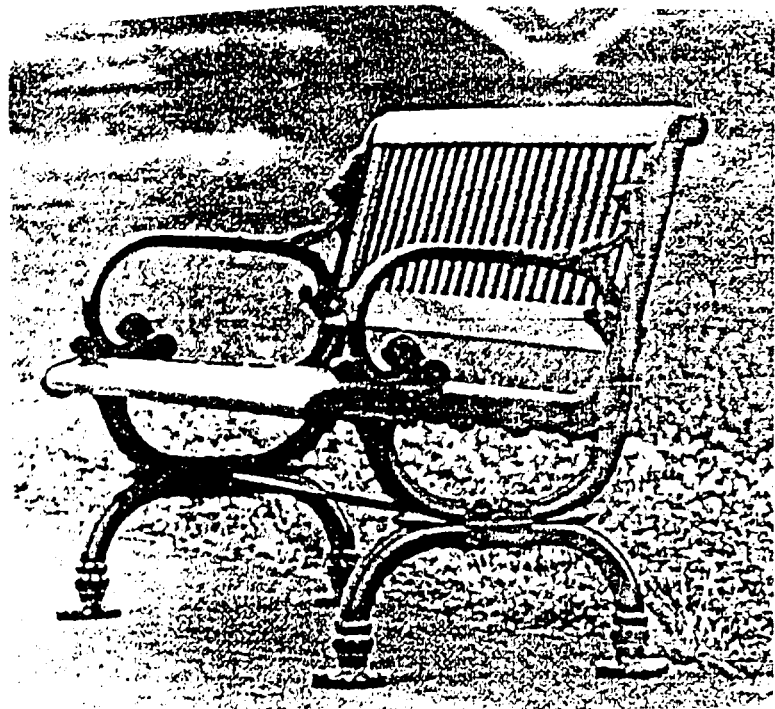
As manufactured by or equal to Bench Mfg. Co.
P.O. Box 66
Essex St. Station
Boston, MA 02112
617-436-3080
- 1.B. Item Contour Bench
Material Wood seat and back with metal supports

Color Natural wood color, black metal parts

Application More contemporary areas and in less visible locations within the VC historical zone

As manufactured by or equal to Landscape Forms/LFI
431 Lawndale
Kalamazoo, Michigan 49001
800-521-2546

Model No Timberline 3.13
(Redwood or Red Oak)
313PE2572 POE:
Support (Square, tubular embedded)

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1.A. HISTORICAL BENCH



1.B. CONTOUR BENCH

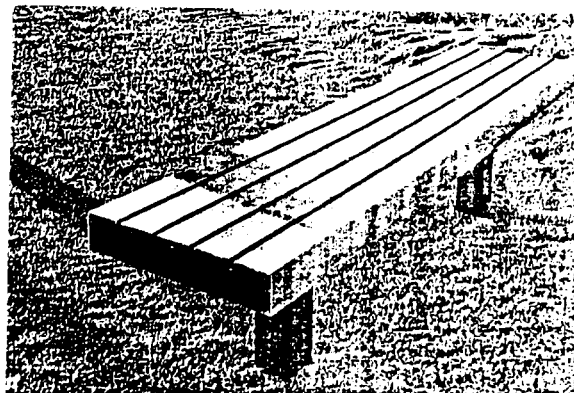
Furnishing Selection

CC SS BH OS

- 1.C. Item Backless wood bench
Material Wood seat, metal pedestal
Color Natural wood color, black metal
Form/style Simple, wood slat seat with embedded pedestal
Application Less visible areas, troop training areas.
Zones: CS, OS, SS

As manufactured
by or equal to Landscape Forms/LFI
431 Lawndale
Kalamazoo, Michigan
49001
800-521-2546

Model No Forum 39 PE 1972
Redwood, PDE Support
(square tubular embedded)



1.C. BACKLESS WOOD BENCH

- 1.D. Item Picnic table
Material Pressure-treated wood top and seats, galvanized pipe supports
Color Natural wood color, galvanized pipe color
Form/style Two seats per table, single pedestal
Application Recreational areas
Zones: OS, BH

As manufactured
by or equal to Gametime
P.O. Box 121
Fort Payne, Alabama
35967
205-845-5610

Model No 795, 6 ft., single post picnic table

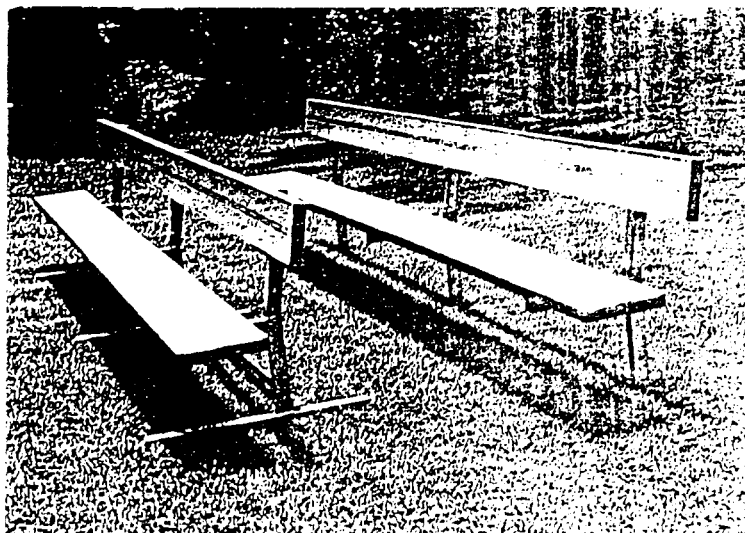


1.D. PICNIC TABLE

Furnishing Selection

OS

1.E.	Item	Aluminum recreational field bench
	Material	Aluminum
	Color	Metallic color - clear finish
	Form	Simple metal slat seat with back, embedded pedestal support
	Application	Recreational fields only - to match existing benches used by Army. Zones: OS only
	As manufactured by or equal to	Outdoor Aluminum P.O. Box 118 Geneva, Alabama 36340 800-225-4249
	Model No	PTCGL-7.5 (7.5 ft. length)



1.E. RECREATIONAL FIELD BENCH

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Furnishing Selection

GW VC HF OS

Bollards

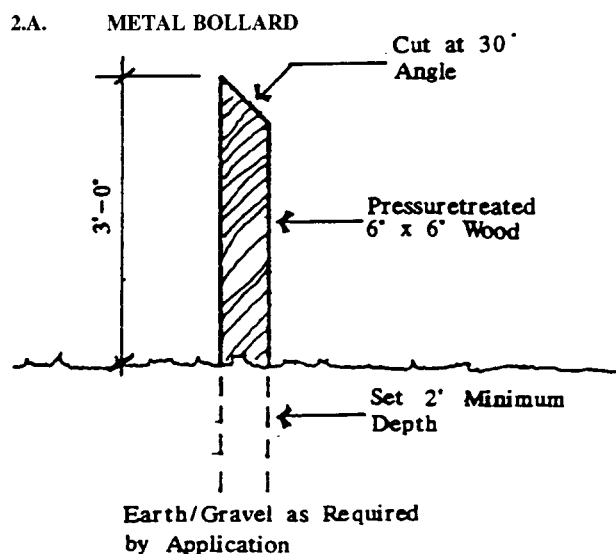
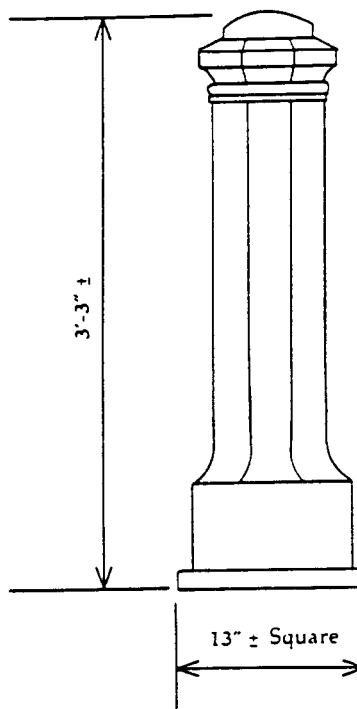
- 2.A. Item Metal bollard
- Material Cast iron
- Color Black
- Form/style Traditional hexagonal, articulated
- Application Highly visible areas within historical zones requiring vehicular circulation control
Zones: GW, VC, HF

As manufactured
by or equal to Spring City Electrical
Manufacturing Co.
P.O. Drawer A
Spring City, PA 19475
215-948-4000

Model No Newburyport Bollard
3'-3" ht, 14" diameter

- 2.B. Item Wood bollard
- Material Wood
- Color Natural, pressure-treated
- Form/style 6"x 6" square wood, cut top on 30° angle
- Application Recreational areas, housing areas, vehicular circulation control, OS

As manufactured
by or equal to N/A



2.B. WOOD BOLLARD

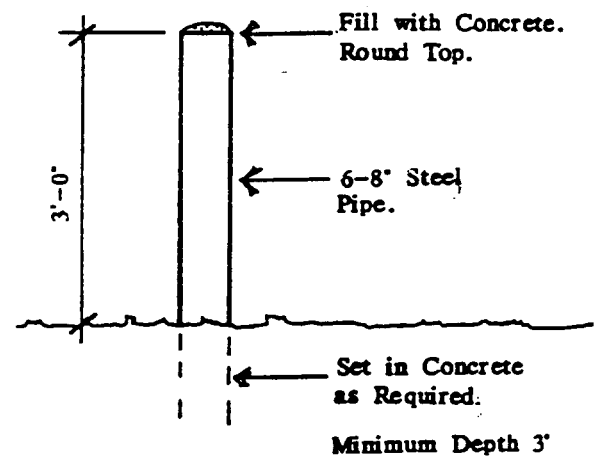
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Furnishing Selection

CC SS BH OS

Bollards

2.C.	Item	Concrete filled pipe bollard
	Materials	Galvanized steel pipe filled with concrete with convex top
	Color	Black colored finish
	Form	Simple cylinder
	Application	Service areas, protection of building walls, corners, where required in less visible areas
	As manufactured by or equal to	Make and install on post - 3 ft. height, 6-8 inch diameter



2.C. CONCRETE-FILLED PIPE BOLLARD

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Furnishing Selection**Trash Receptacles**

- 3.A. Item Metal receptacle
Material Solid steel with interior fiberglass lid

Color Black colored finish

Form Round, metal slat with flared top

Application High visibility areas within historic zones
Zones: HF, VC, GW, CC
- As manufactured
by or equal to Victor Stanley
Brick House Road
Dunkirk, Maryland 20754
301-855-8300
- Model No S-42, Ironsites
The Bethesda Series
- 3.B. Item Metal Mesh Receptacle
Material Perforated steel

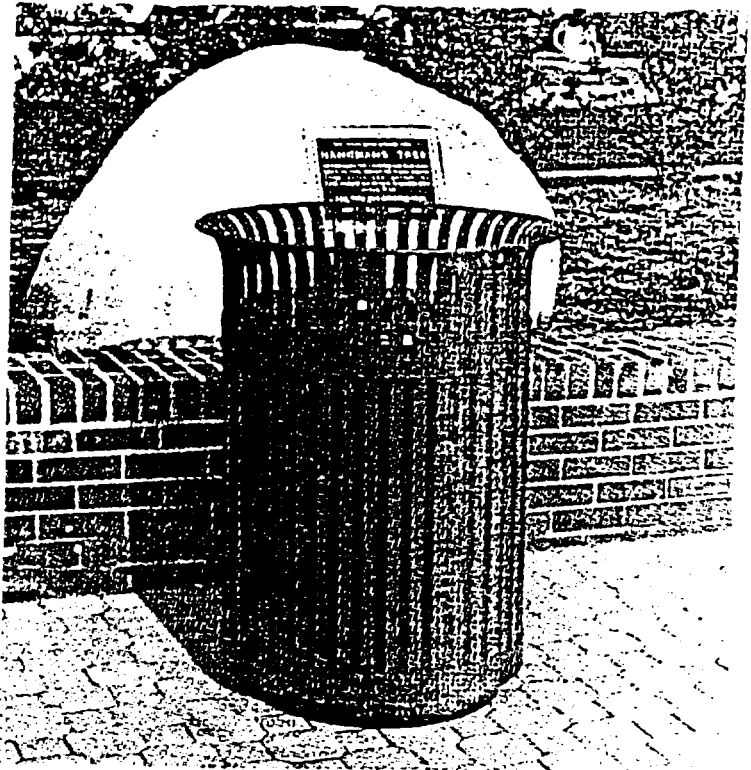
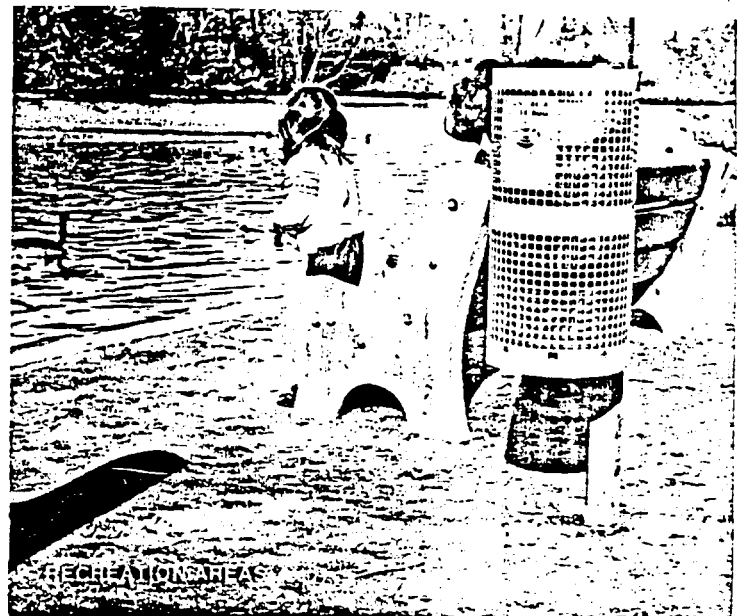
Color Black colored finish

Form Cylinder - mount on pole
with bolts & straps

Application General use throughout post
Zones: GW, VC, BH, CC,
OS, SS
- As manufactured
by or equal to Howard United Metal
Receptacle Corp.
Pottsville, PA 17901
717-622-7715
- Model No H-2 with bolts and straps
for pole mounting

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

GW VC CC SS BH OS

**3.A Steel Receptacle****3.B Pole Mounted Perforated Steel Receptacle**

Furnishing Selection

GW VC HF BH

Fencing/Railings

- 4.A. Item Metal picket fence
Material Tubular steel
- Color Black finish
- Form/style Traditional picket
- Application Areas of high visibility
Zones: GW, VC, HF,
CC, SS; (also on edges
of zones adjacent to HF)

As manufactured
by or equal to Westmoreland Tubular
Products Mfg. Co.
Bristol, PA
215-949-3100

Model No Barrier Traditional

- 4.B. Item Wood fence
Material Wood
- Color White (residential yard
border)

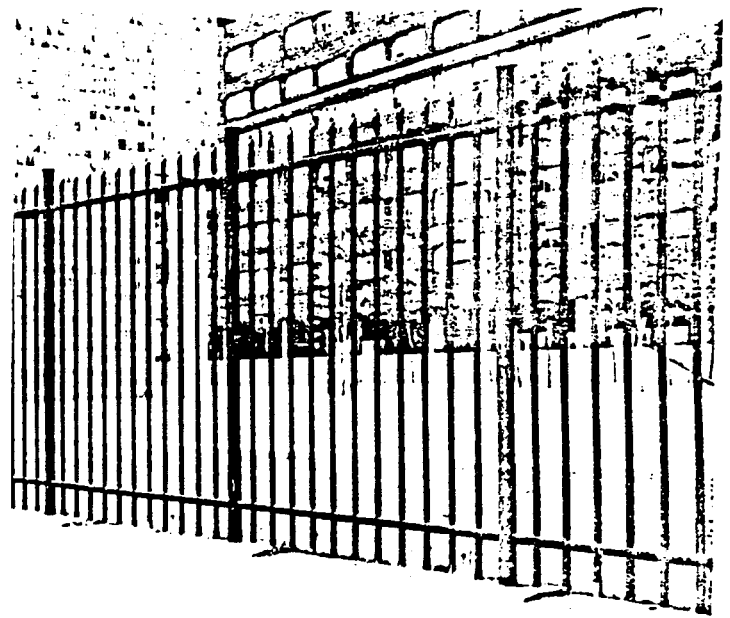
Dark stain (screening of
utilities or service areas)

Form Traditional post, board,
rail pattern

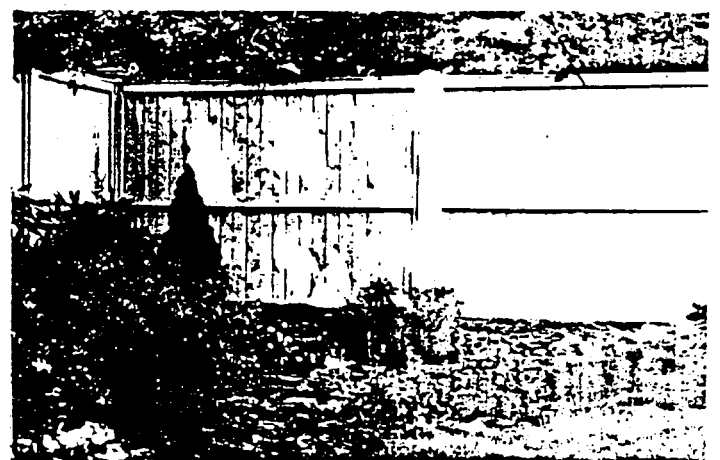
Application Screening or area definition
in historical and residential
areas; Zones: VC, HF, BH

As manufactured
by or equal to Walpole Woodworkers
767 East Street
Walpole, MA 02081
617-668-2800

Model No The "Universal" fence
4, 5, 6, or 8 ft. high



4.A Steel Picket Fence

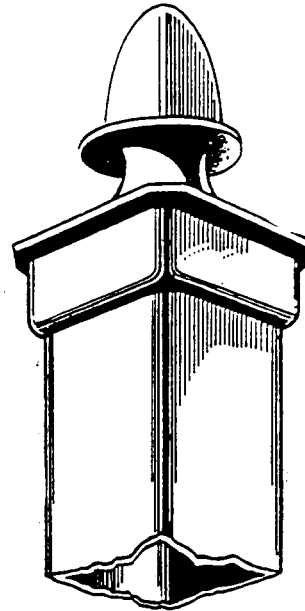
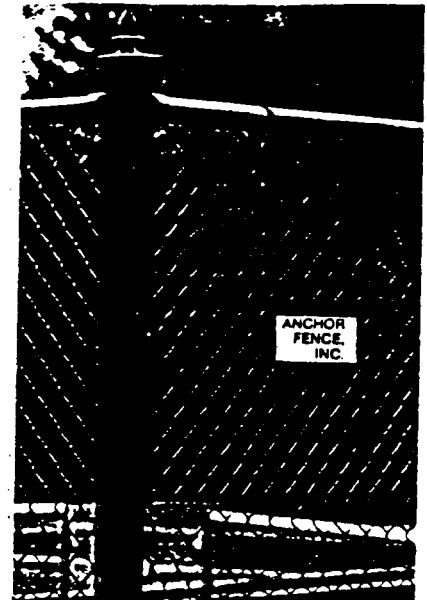


4.B Wood Fence

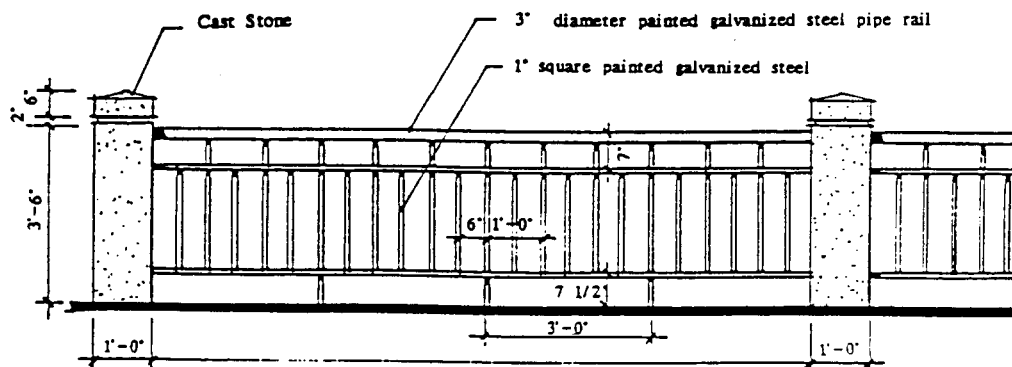
Furnishing Selection

GW VC HF CC SS

4.C.	Item	Chain link fence
	Material	Galvanized mesh with vinyl coating
	Color	Black vinyl coat
	Form	Posts and rails as required, with square terminal post tops
	Application	High security in areas of low visibility, SS
	As manufactured by or equal to	Anchor Fence Co. 6500 Eastern Ave. Baltimore, Maryland 21224 301-633-6500
	Model No	As required for application with PVC vinyl and square terminal posts

4.C. CHAIN LINK FENCE WITH SQUARE
TERMINAL POST

4.D.	Item	Cast stone & tubular steel	Form/Style	As illustrated
	Material	Cast stone bollard post tubular steel rails and pickets	Application	To be used along the water's edge in high visibility areas.
	Color	Cast stone-limestone steel - black	As manufactured by or equal to	To be custom fabricated.

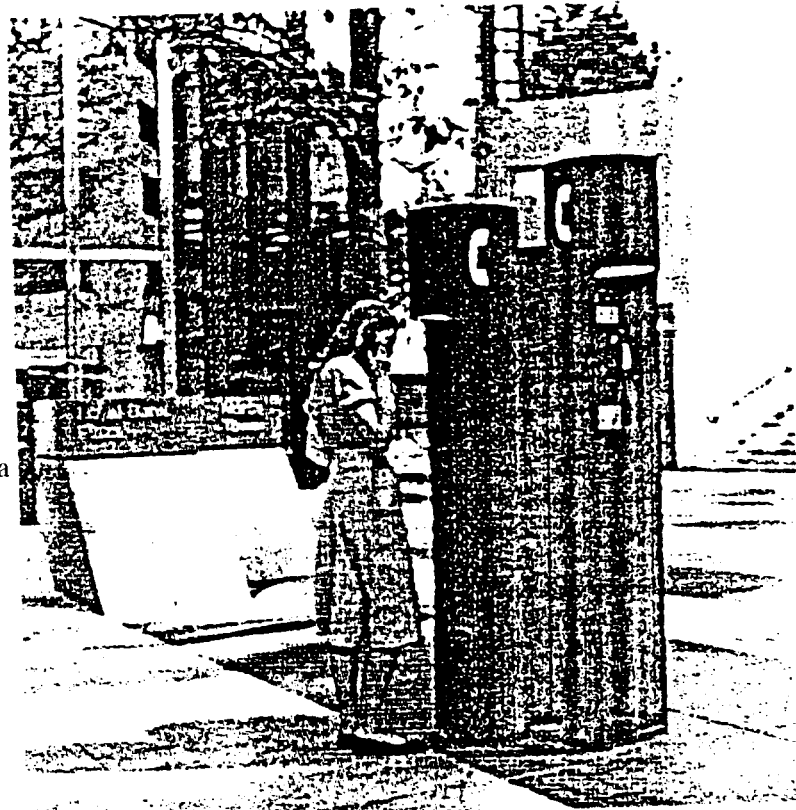
4.D. CAST STONE & TUBULAR STEEL
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Furnishing Selection

GW VC HF CC SS BH OS

Phone Booths

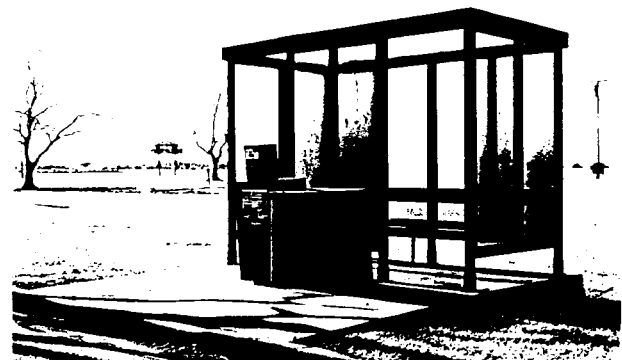
- 5.A. Item Kiosk phone booth
Material Cast aluminum
- Color Black finish
- Form Cylinder
- Application Use only in high-volume pedestrian areas
- As manufactured by or equal to King Products Ltd. 3150 Wharton Way Mississauga, Ontario, Canada L4X2C1 416-625-1111
- Model No 540, Telephone kiosk



5.A Phone Booth

Bus Shelters

- 6.A. Item Bus shelter with bench
Materials Aluminum structure with wood bench
- Color Aluminum to have black finish, bench to be natural wood color.
- Form Simple rectangular shape with flat roof
- Application Throughout post as required
- As manufactured by or equal to Michigan Industrial Co. 5505 36th Street Grand Rapids, Michigan 49508 616-949-1900
- Model No "Manatee Shelter"

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT


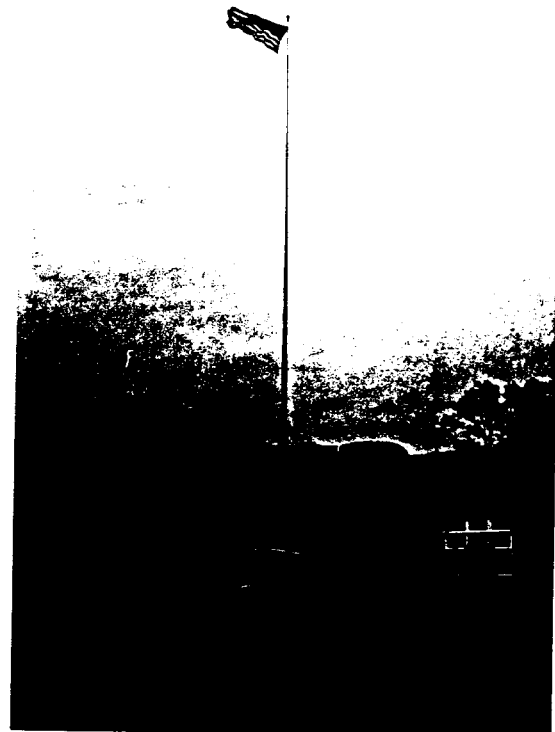
6.A. BUS SHELTER

Furnishing Selection

GW VC HF CC OS

Flagpole

7.A.	Item	Steel flagpole
	Material	Stainless steel pole
	Color	Clear finish, satin rubbed finish
	Application	Key ceremonial and activity area
	As manufactured by or equal to	Acme Flagpole Co. Lingo, Inc. Box 1237, 28th Street Camden, NJ 08105 609-964-0487
	Model No	As required with: <ul style="list-style-type: none"> • Standard foundation • Flag clasp with thermoplastic finish • Ball on pole top • Polished finish #4



7. FLAGPOLE

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Furnishing Selection

GW VC HF CC SS BH OS

Drinking Fountains

- 8.A. Item Drinking fountain
- Material Cast-iron base, stainless steel
 and brass parts
- Color Black finish
- Form Octagonal base
- Application General use as required in
 pedestrian areas
 Zones: GW, VC, HF, BH, CC

As manufactured
by or equal to Murdock, Inc.
 2488 River Road
 Cincinnati, Ohio 45204
 513-471-7700

- 8.B. Item Drinking fountain for
 handicapped use
- Material Cast aluminum
- Color Black finish
- Form Pedestal mount
- Application As required

As manufactured
by or equal to Murdock, Inc.
 2488 River Road
 Cincinnati, Ohio 45204
 513-471-7700

Model No M-43
 Pedestal Mount



8. DRINKING FOUNTAIN

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Furnishing Selection

OS

8.C. Item Water spigot - as used
 by the Army (match existing)

 Application Training and recreational areas

 As manufactured
 by or equal to Water Valve-Spicket
 Woodford, Iowa

 Model No #106D "Variable Flow"



8.C. WATER SPIGOT

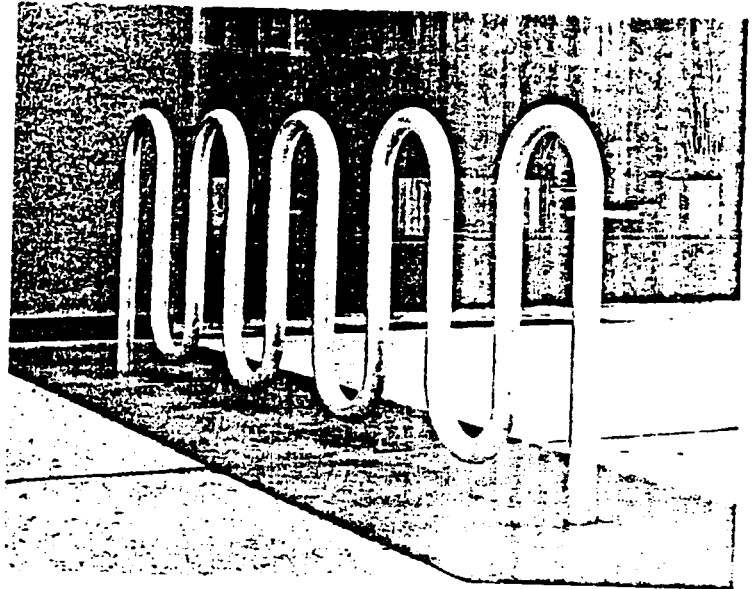
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Furnishing Selection

GW VC HF CC SS BH OS

Bike Rack

9. **Item** Ribbon-shaped bike rack
- Material** Welded, seamless pipe
- Color** Brushed metal finish
- Form** Sinuous curved rack,
 embedded below grade
- Application** At building entries out
 of main circulation areas
- As manufactured
by or equal to** Bike Security Racks
 Space Lattice Co.
 P.O. Box 371
 Cambridge, MA 02140
 617-547-5755
- Model No** "Bike Stanchion"
 BS-B3
 Mounted below-grade

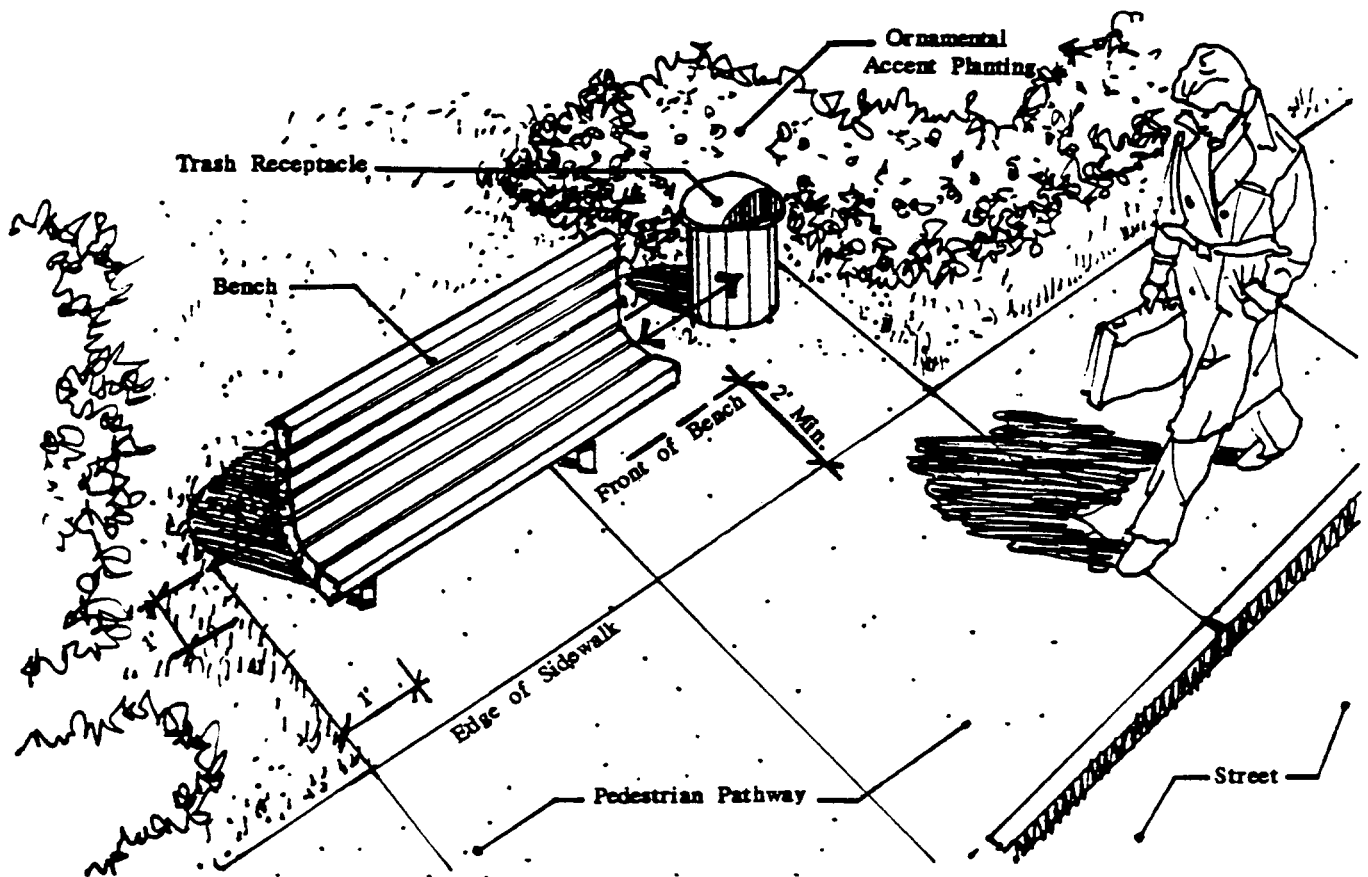
9. **BIKE RACK**☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Bench/Sidewalk

GW VC HF CC

Relationship of bench and sidewalk

- The simplest of relationships between site furnishings and site conditions is illustrated here.
- Benches in the appropriate style should be located in areas of active pedestrian use.
- A bench should be incorporated with a trash receptacle in the appropriate style.
- Paving should extend a minimum of 1' beyond the end and back of bench.
- Bench should face walkway activity area.

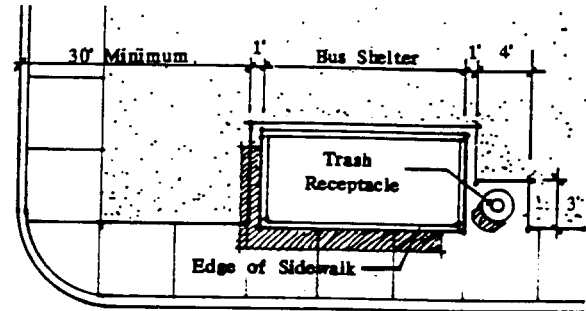
**CONCEPTUAL RELATIONSHIP OF BENCH AND WALKWAY**
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Site Furnishings

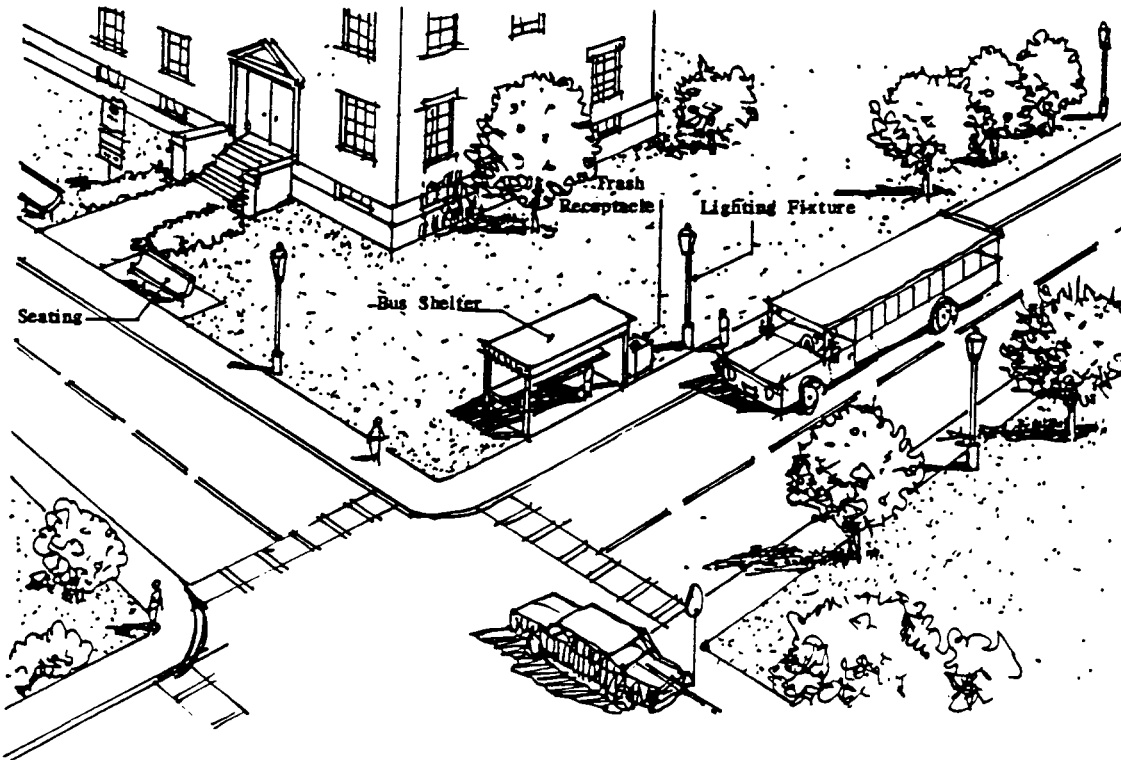
GW VC HF CC SS BH

Bus Shelters**Location**

- Bus shelters should be located in as few locations as possible, only where the heaviest demand exists.
- The shelter should be a minimum of 30' from the corner in order to not obstruct the view of on-coming traffic and not interfere with pedestrian movement on the sidewalk.
- Trash receptacles and lighting fixtures should be located in proximity to bus shelter.



CONCEPTUAL PLAN OF BUS SHELTER



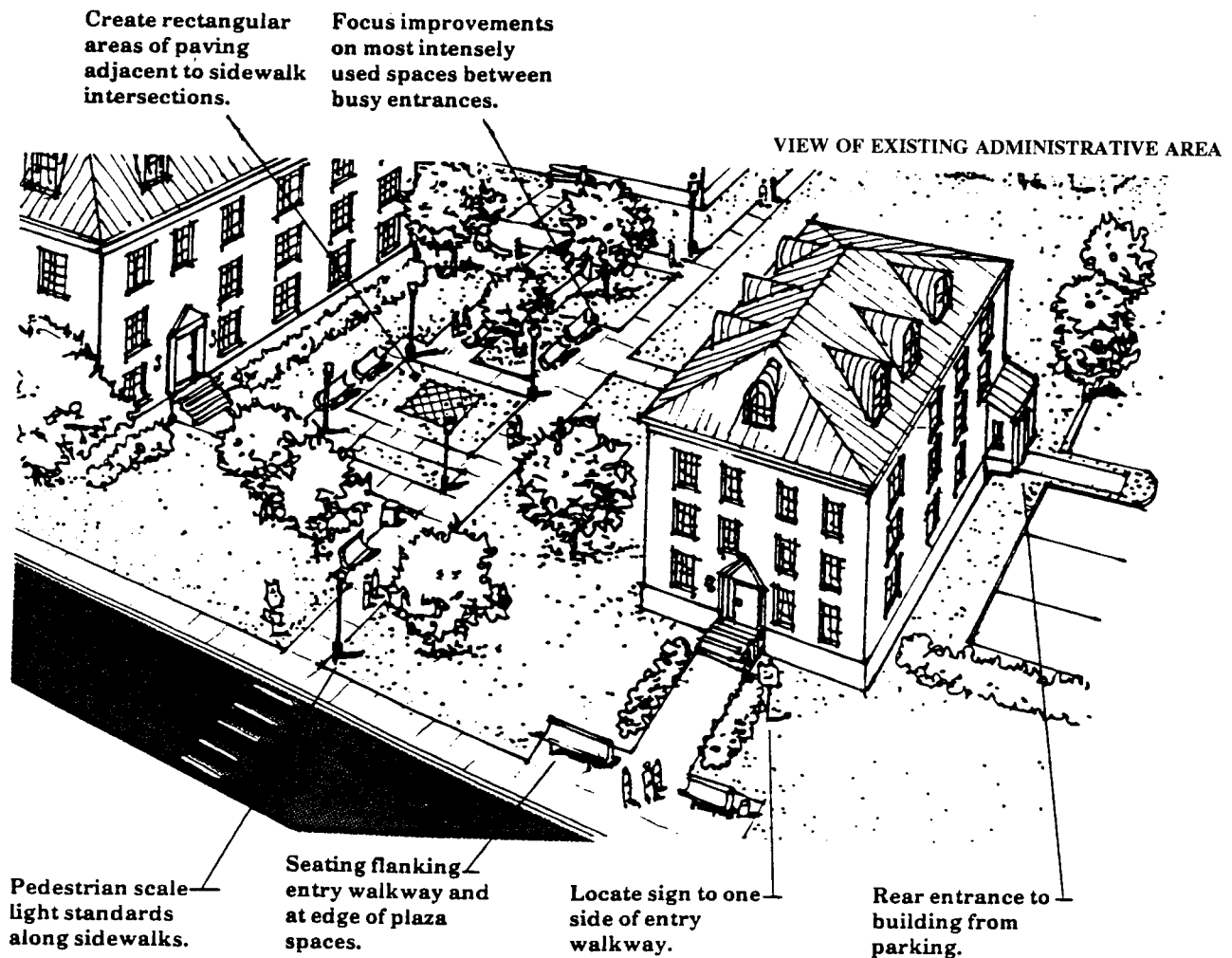
CONCEPTUAL RELATIONSHIP BUS SHELTER, STREET, SITE FURNISHINGS

Relationship of Site Furnishings

GW VC HF CC

Buildings/Open Space

Small plaza areas are important where administration buildings are clustered. These are the places people use enroute to different offices. They serve as informal meeting places and unify the complex of buildings.



CONCEPTUAL RELATIONSHIP OF SITE FURNISHINGS AND BUILDING/OPEN SPACES.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

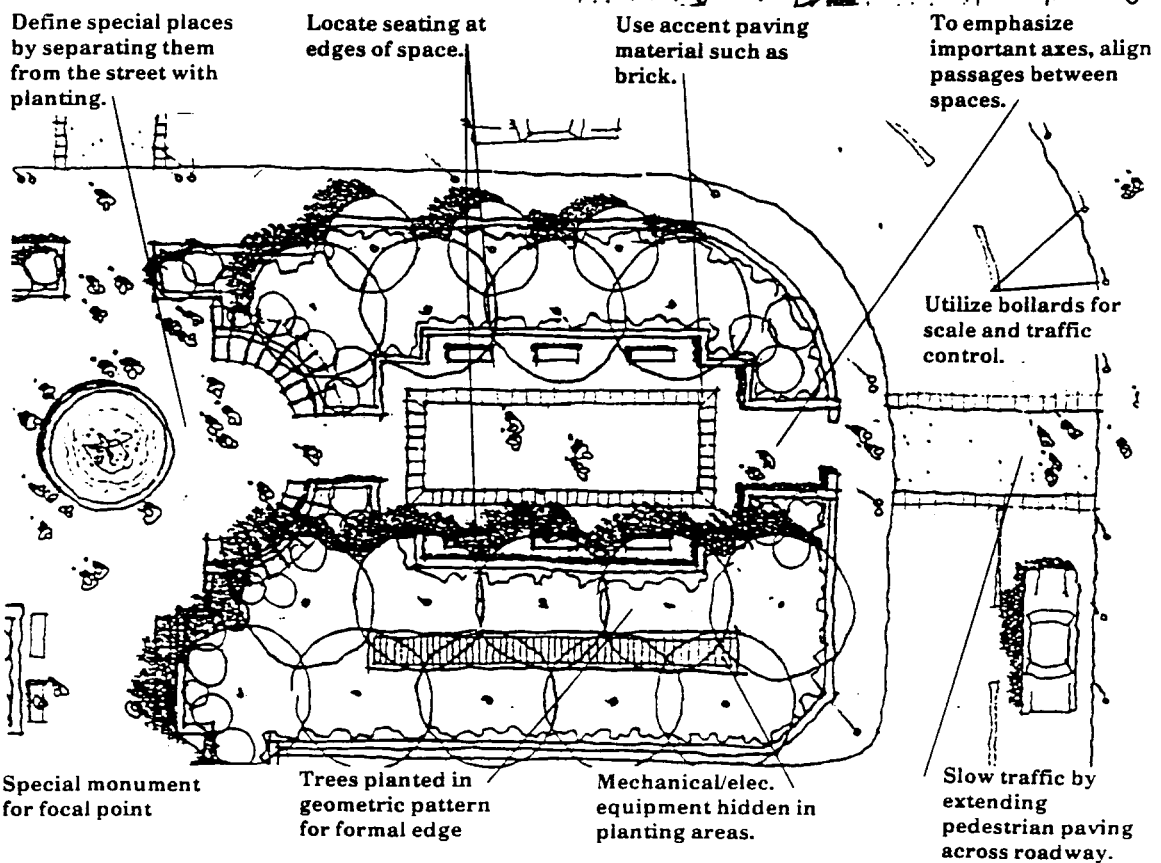
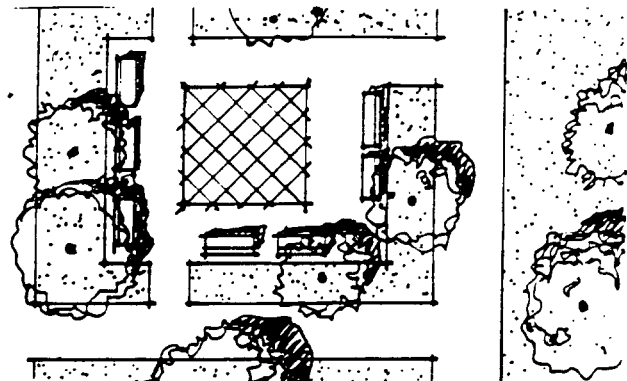
Relationship of Site Furnishings

GW VC HF CC

Plaza - Courtyards

Create a small defined "outdoor room" by forming a rectangular area of paving, using accent materials, such as brick with concrete.

CONCEPTUAL PLAN FOR OUTDOOR ROOM



CONCEPTUAL PLAN FOR PROTOTYPICAL PLAZA/FORMAL OPEN SPACE

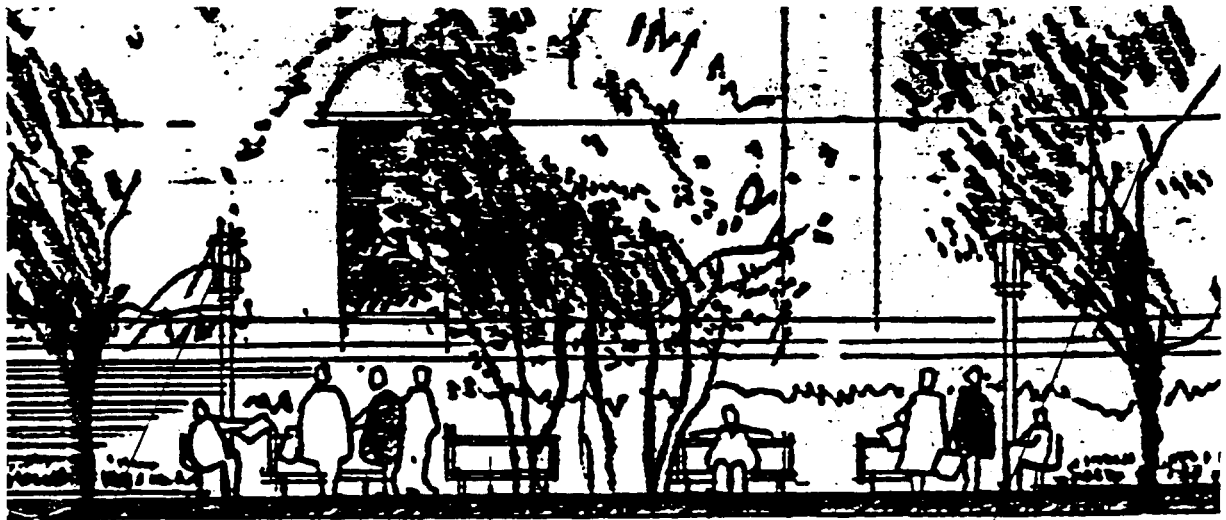
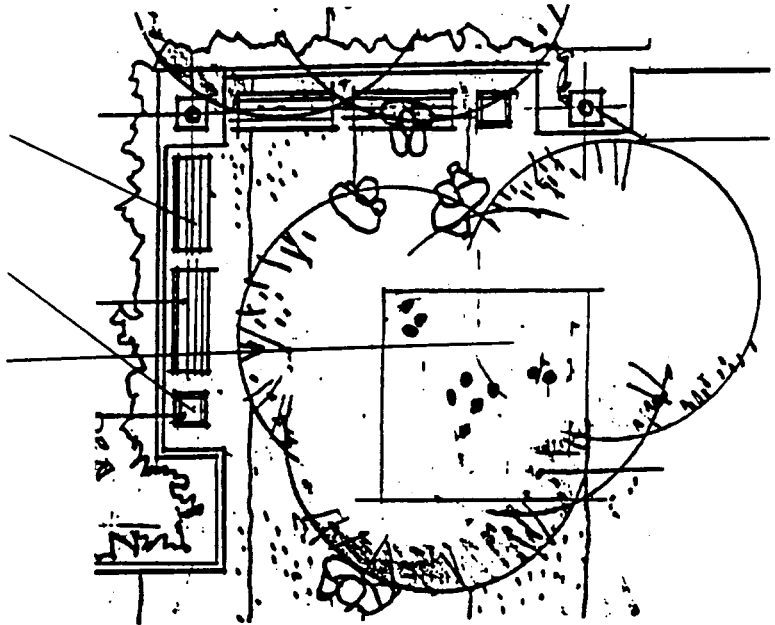
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Site Furnishings

GW VC HF CC

Seating in Plazas/Courtyards**Relationship of seating/
Site furnishings**

- Seating should be located at perimeter of plaza spaces oriented toward activity or amenity.
- Lighting and trash receptacles should be in close proximity.
- Planting/trees should provide shade and define pleasant groupings for seating.



Pedestrian scale
light fixtures.

Seating placed at
perimeter oriented
toward activity area.

Trees and planting
to provide shade and
break up paved area.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

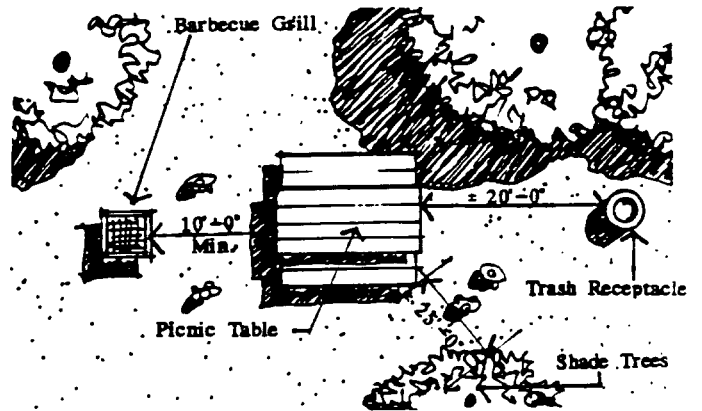
Site Furnishings

OS

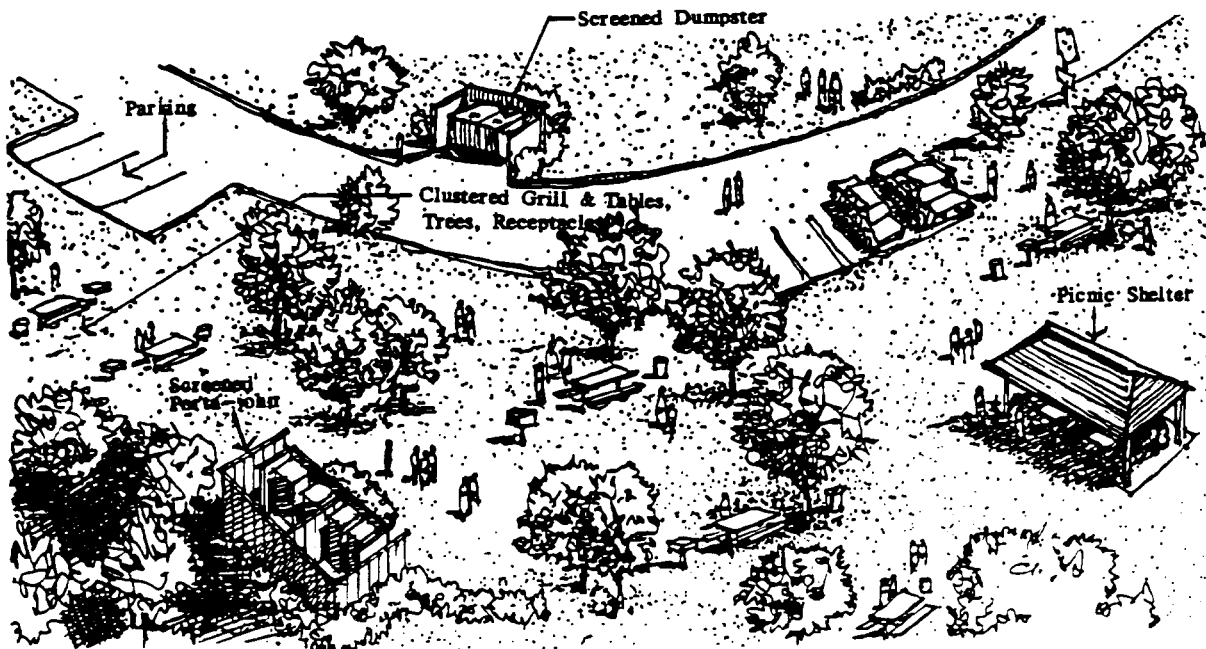
Recreation/Picnic Areas

Site furnishing should be grouped together to form clusters of activity in the open space, rather than randomly scattered in the OS zone.

- Picnic tables should be placed close to trees for shade, but not underneath the tree. Grills and trash receptacles should not be too close.
- The relationship of active recreational uses and facilities must be carefully planned and related to the natural elements in the landscape, especially shade trees.



RELATIONSHIP OF PICNIC FURNISHINGS



CONCEPTUAL RELATIONSHIP OF SITE FURNISHINGS - RECREATION AREAS

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Section 3-5

Lighting & Utilities

Lighting & Utilities

GW VC HF CC SS BH OS

Introduction

This section includes two separate but related elements that have a significant impact on the visual environment (lighting and utilities). Both these elements are most commonly associated with the street system or roadway right of way.

Lighting Overview

The exterior lighting system on the post provides visual impressions from both a functional as well as a perceptual point of view. Our observations reveal that the general daytime pedestrian and vehicular movement supported by an intensive use of facilities creates an active environment. This sense of activity is furthered by the component of daylight which permits one to visualize the post through the street corridors, the building facades, and the clear sense of edge or boundary created by the surrounding water. The view is enhanced by the presence of trees along many of the streets, which soften the edge between the pedestrian walkways and areas for vehicular passage.

What appears to be a friendly campus-like environment psychologically changes personalities somewhat in the evening.

As is generally the case in the evening, the after-office-hour syndrome occurs when many of the operations and facilities are closed and personnel have left the premises. Additionally, vehicular traffic is reduced and, what was hours earlier an active campus, now becomes a somewhat static environment.

Compounding this situation is the fact that the evening brings darkness and a uniform reduction in scale and presence of the post; as well as the contradictory program in recent years of reducing the nighttime exterior light levels to conform to

energy conservation directives. In general, the nighttime perception of the post is not as pleasant as the daytime environment.

The street luminaires, which in daylight receded into the tree and facade backdrop, become visible at night (as points of light) and set the new scale for the post. The visual quality of the light (which is low pressure sodium) is also negatively affected by the energy concerns. The relatively low light output and very distorted yellow/orange light quality casts a peculiar veil over the post at night.

Where additional security lighting is required, it is often mounted on top of buildings, aimed away from the buildings. The darkened building facades and deep shadows created by this technique, in effect, make it nearly impossible for security personnel and surveillance equipment to distinguish anyone between the beam of light and its backdrop (building walls).

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Lighting and Utilities

GW VC HF CC SS BH OS

Introduction - Lighting Lamp Types

There exist a number of light sources available for exterior lighting. The following is a simple description of each type. This information is general only; for specific application, more detailed design will be required:

Low Pressure Sodium - This light source is very energy-efficient but puts out a very low level of light. The color rendition from the light is yellow/orange and visually reflects plants and people poorly.

High Pressure Sodium - This light source is very efficient, relatively long-lived, with a high lighting level. The color rendition is pink/orange which is not particularly flattering to plants or people.

Mercury Vapor - The mercury vapor lamp is the longest-lived of any of the sources mentioned here. It is not as efficient as the high pressure sodium and produces lower lighting levels. The color of the light produced is bluish/green and not complimentary to people or plants, although it is not as offensive as high pressure sodium light. Color corrected mercury vapor is even less offensive and should be used instead of mercury vapor.

Metal Halide - Metal halide is between mercury vapor and high pressure sodium in both efficiency and longevity. It has good color rendition and is not psychologically offensive to people.

Incandescent - This lamp type has the most pleasing color of all light sources. However, low efficiency and short life span limit its use except in special areas where

its warm color rendition characteristics are required.

Required illumination levels are determined by the amount of nighttime activity that will take place in a given area. Primary streets will be brighter lit than secondary streets. Housing areas should be lit at the lowest level allowed for safety. Standards for foot-candle levels should be followed for the different use areas with allowances for special conditions and will require specific engineering/design studies.

Lighting Recommendations

Our recommendations at this point in time are broad brush in nature and discuss solutions in a generic sense. In an effort to comprehend these recommendations, it is important to understand a basic physical requirement which is: light to see by as distinguished from light you see. This physical requirement calls for sufficient light without distraction and with appropriate direction and diffusion. It is a simple requirement, but within its general framework, the precise amount and placement of light (not fixtures) will vary widely according to the demands.

Light Source/Lamp Type Recommendations

- * A single light source type should be used throughout an entire visual zone and preferably throughout the entire street system.
- * Color-corrected mercury vapor or metal halide is recommended for the entire post but especially the higher visibility areas of the gateway, village campus, historic fort, and community services center zones.

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Lighting and Utilities

GW VC HF CC SS BH OS

Light Source/Lamp Type Recommendations

- * Incandescent light should be utilized in the Wherry Housing zone associated with a surface-mounted house light program.

- * Where underground placement is not possible and where distribution systems necessitate above-ground placement, careful coordination must be carried out to assure that unsightly utilitarian equipment is located and screened from view. The pages that follow in this section will address these techniques in more detail.

Lighting Application

- Appropriate fixture types are described in detail in the following pages of this section.
- In general terms, more emphasis should be placed on illuminating building facades, especially the more significant architectural structures and portions of the historic fort. This will have both a symbolic visual improvement effect, as well as an improved security impact.
- * Lighting should be reflected off building facades rather than light sources being mounted on and shining away from building facades. Reflected light has a much more beneficial impact and should be carefully placed to minimize offensive glare.

Utility Systems Overview

The utility systems are the infrastructure that carry and distribute power, water, gas, steam, wastes and communications throughout the post. While these systems are essential to the operations of the post, their functional requirements must not dominate the streetscape.

Utility Recommendations

- * As a general rule, utility systems should be combined and placed underground. This is especially true in high visibility areas.

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Lighting and Utilities

GW VC HF CC SS BH OS

Light Matrix

Selection of Fixtures The following matrix is a summary of the light fixtures to be used on post within the appropriate visual zones. Refer to DC 5.2, 5.3, and 5.4 for specific fixture types, and to DC 5.5.1-5.5.3 for specific recommendations on location and application. The three columns below contain the following information: Light fixture: (general description), application, and appropriate visual zone. Though there may be exceptions to application and visual zone, the matrix may be used as a general guide followed by more detailed information on installation and location.

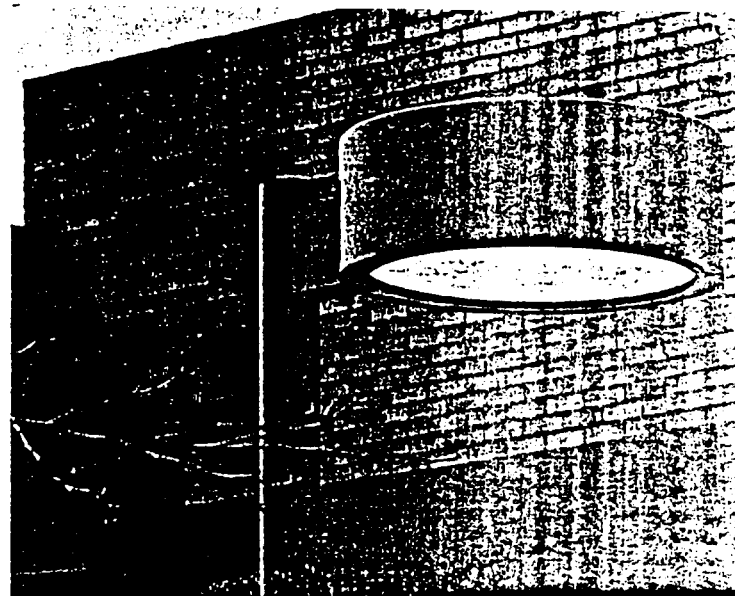
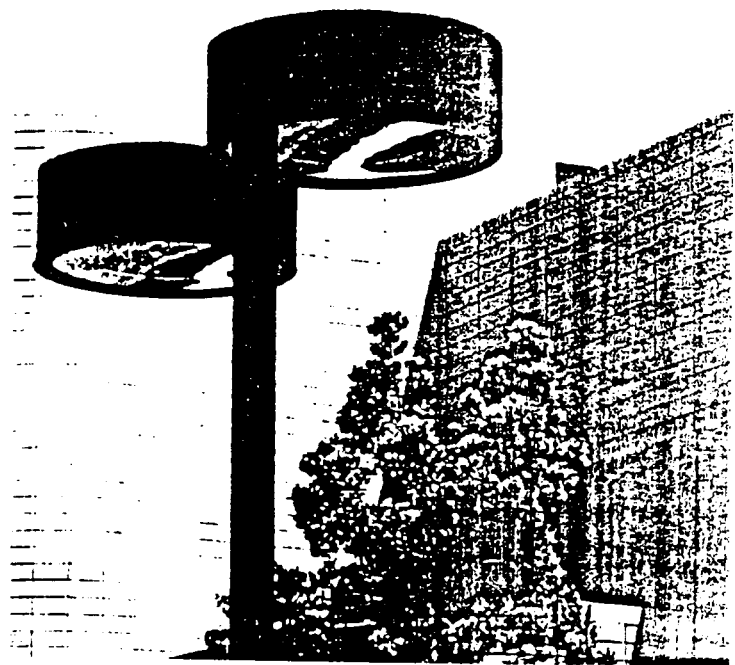
Light Fixture	Application	Visual Zone						
		GW	VC	HF	SS	CC	BH	OS
1. Curvilinear Cutoff/Luminaire	A. Roadways				●	●	●	●
	Single luminaire					●	●	●
	C. Parking lot perimeter				●	●	●	●
	D. Service areas	●	●	●	●	●	●	●
Double luminaire	Parking lot islands	●	●	●	●	●	●	●
2. Historical Cast iron Post lantern	A. Roadways	●	●	●				
	B. Walkways	●	●	●				
	C. Areas of high visibility	●	●	●				
3. Historical Light bollard - Cast iron	Plazas & courtyards		●	●				
4. Contemporary Light bollard - Aluminum	Plazas & courtyards					●	●	●
	Areas of high visibility							
5. Flood lights	A. Recreational fields							●
	B. Security lighting				●			
6. Accent lighting	A. Ceremonial areas, monuments	●	●	●				
	B. Architectural highlighting	●	●	●		●		

Lighting and Utilities

GW VC HF CC SS BH OS

Light Fixtures

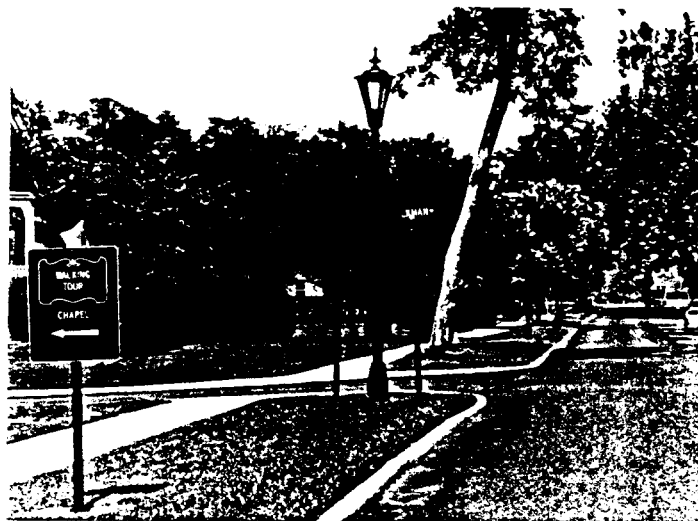
- | | | |
|----|--------------------------------|--|
| 1. | Fixture Description | Round, cut-off fixture |
| | Material | Cast aluminum pole and housing |
| | Color | Black finish on all parts |
| | Application | Roadways - single mount
Parking lots - single mount
on periphery, double mount within parking lots in curbed islands as required
Walkways - single mount (See Application Section for height range of fixtures) |
| | As manufactured by or equal to | Kim Lighting by Kidde
16555 E. Gale Ave.
P.O. Box 1275
Industry, California 91749
818-330-3861 |
| | Model No | Series - CCL, 329, 325, 320 or 529, 525, 520; PBCL or PCCL Poles with optional Lexan Shield |

**.Single-mount Cut-off Fixture****Double-mount Cut-off Fixture**
☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

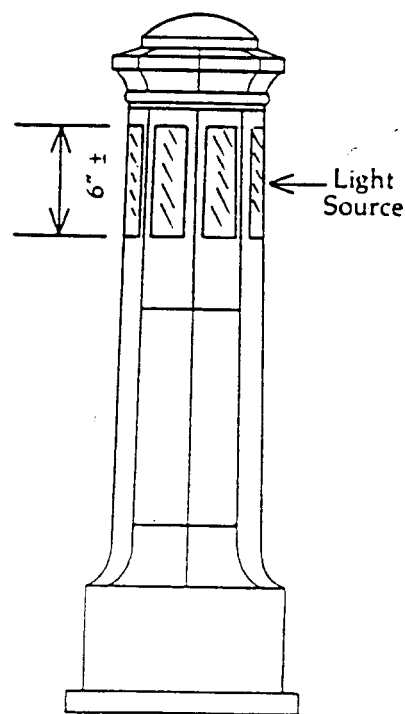
Lighting and Utilities
Light Fixtures

GW VC HF

2. Fixture Description Historical cast-iron light fixture for roadway and sidewalk applications (to match existing fixture used on post)
- Material Cast iron pole and housing
- Color Black finish
- Application Historical areas along roadways and sidewalks
- As manufactured by or equal to Hadco
P.O. Box 128
Littlestown, PA 17340
717-359-7131

HISTORICAL ROADWAY &
SIDEWALK FIXTURE

- Model No #S 3801
10 ft. pole
3'-3" lantern
1'-6" base
Hexagonal base
3. Fixture Description Historical light bollard
- Material Cast iron
- Color Black finish
- Application Pedestrian areas within historical zones requiring vehicular traffic control
- As manufactured by or equal to Spring City Electrical Mfg. Co.
P.O. Drawer A
Spring City, PA 19475
215-948-4000
- Model No Newburyport lighted bollard

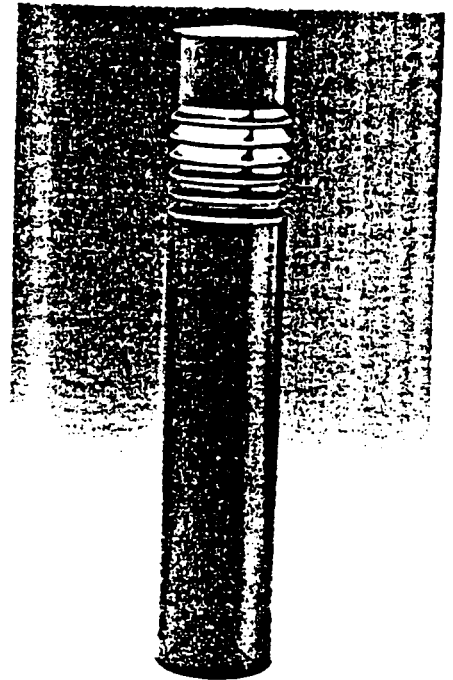
HISTORICAL LIGHT
BOLLARD

Lighting and Utilities

GW VC HF CC SS BH OS

Light Fixtures

- | | | |
|----|--|--|
| 4. | Fixture | Contemporary Cylindrical |
| | Description | Light bollard |
| | Material | Cast aluminum |
| | Color | Black finish clear poly-carbonate diffuser |
| | Application | Non-historic pedestrian areas |
| | As manufactured by or equal to | Sterner Lighting Systems, Inc. Winstead, Minnesota 55395
612-485-2141 |
| | Model No | Annapolis Round ART - 12" dia. bollard ht. - 36" |
| 5. | Fixture | Floodlights |
| | Application | As required for recreational fields, high security areas |
| | As manufactured by or equal to (Suggested manufacturers) | GTF Sylvania
Lithonia Lighting
North American Phillips
Prescolite
Progress Lighting
Sentry Electric |
| 6. | Fixture | Accent lights |
| | Application | Ceremonial areas, monuments, any site of building feature requiring highlighting |
| | As manufactured by or equal to | Kim Lighting by Kidde
16555 E. Gale Ave.
Industry, CA 91749
818-330-3861 |

**4. Light Bollard**

Light fixtures should be selected on basis of functional requirements in areas of low visibility.

Light fixtures should be selected to provide accent lighting for significant structures and monuments. Fixtures should be screened from view as much as possible.

Lighting and Utilities

BH CC OS SS

Roadway Lighting

Pole adjacent to walkway

- Place pole a minimum of 2' from edge of walkway.

Pole adjacent to curb of street

- Place pole a minimum of 3' from edge of curb.
- Spacing of poles will be determined by light source and layout pattern; follow manufacturer's specifications.

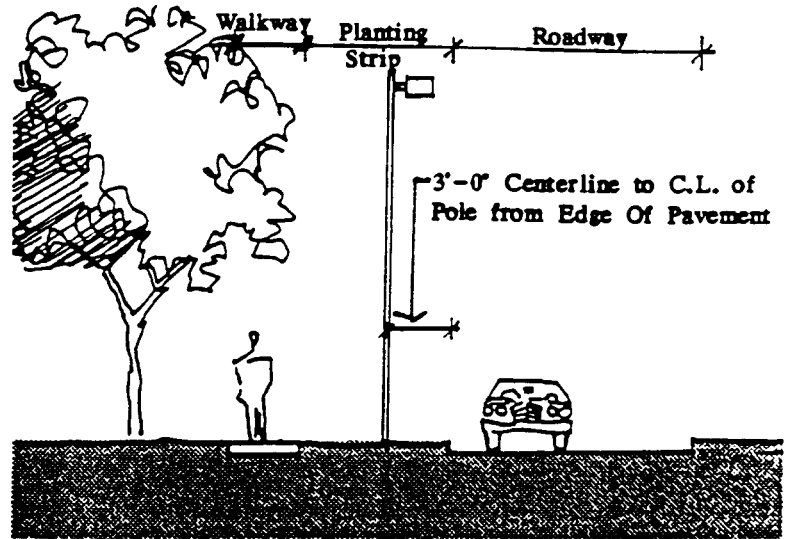
Pole Height & Spacing Guidelines

- Varying assumptions of light source and placement will affect pole placement and height. Assume here one side of road only. 1.5 footcandles, single mount and high pressure sodium light source.

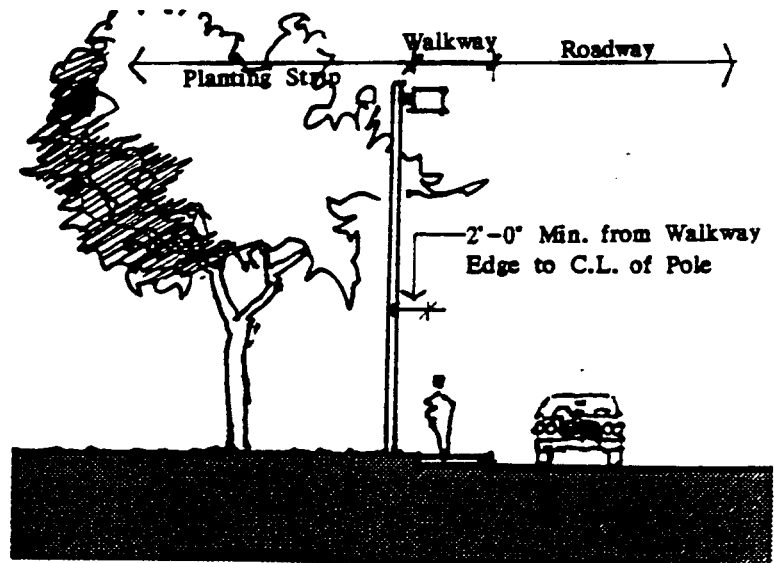
Primary road (road width $\pm 50'$)
Pole height: 30'-40'
Pole spacing: 130' o.c.
(250 watt light source)

Secondary road (road width $\pm 40'$)
Pole height: 25'-30'
Pole spacing: 115' o.c.
(200 watt light source)

Tertiary road (road width $\pm 35'$)
Pole height: 15'-20'
Pole spacing: 100' o.c.
(100 watt light source)



LIGHT POLE ADJACENT TO
WALKWAY



LIGHT POLE ADJACENT TO
STREET

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Lighting and Utilities

GW VC HF BH CC OS SS

Parking and Pedestrian Lighting**Parking Lot Lighting**

Place a light pole at perimeter of lot, a minimum of 3' from edge of curb. Fixtures at perimeter should be single-mounted.

Place double-mounted fixtures on interior planting islands between parking bays. Pole should be a minimum of 3' from edge of curb.

Where no planting island exists, light pole should be placed on 3' high round concrete pier or protected with pipe bollards.

Spacing of poles will be determined by light source and layout pattern; follow manufacturer's specifications.

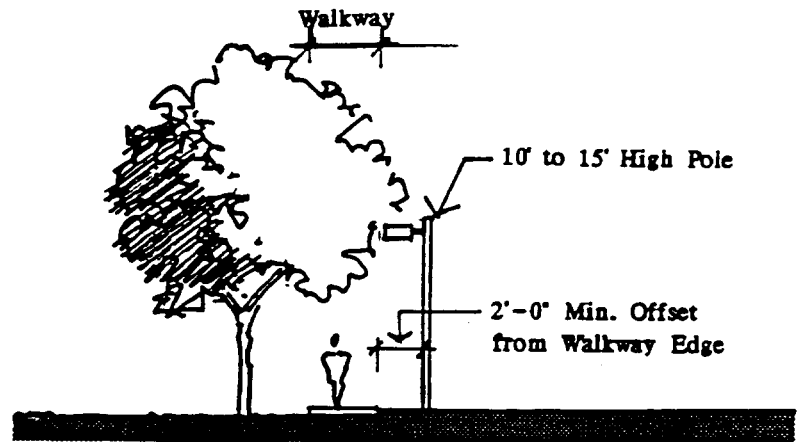
Pole Height & Spacing Guidelines - Parking Areas

Varying assumptions on light source and placement will affect pole placement and height. Assume here double-mounted fixture, high pressure sodium, and two footcandles.

Parking Lot

Pole height: 25'-30'

Pole spacing: 100'-150' o.c.



TYPICAL PEDESTRIAN LIGHTING

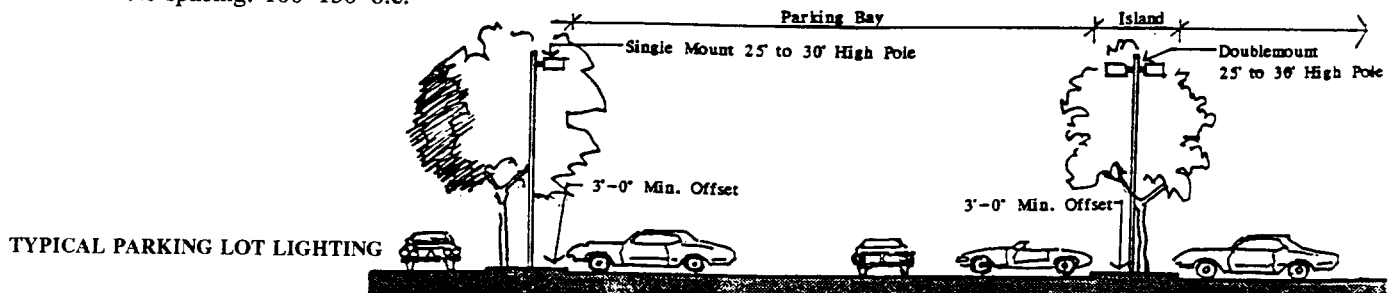
Pole Height and Spacing Guidelines- Pedestrian Areas

- Varying assumptions on light source and placement will affect pole placement and height. Follow manufacturer's specifications. Assume here a high pressure sodium light source, single-mounted fixture and two footcandles.

Pedestrian Areas

Pole height: 10'-15'

Pole spacing: 50'-55' o.c.



TYPICAL PARKING LOT LIGHTING

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Lighting and Utilities

GW VC HF

Historic Post Lantern**Historic Post Lantern Roadway Lighting**

Post lantern adjacent to walkway

- Place post lantern a minimum of 2' in from edge of walkway.

Post lantern adjacent to street

- Place post lantern a minimum of 3' in from edge of curb.

Post lantern height and spacing guidelines

- Varying assumptions on light source and pole placement will affect spacing. Follow manufacturer's specifications. Assume here metal halide light source, 150 watts.

Roadway lighting

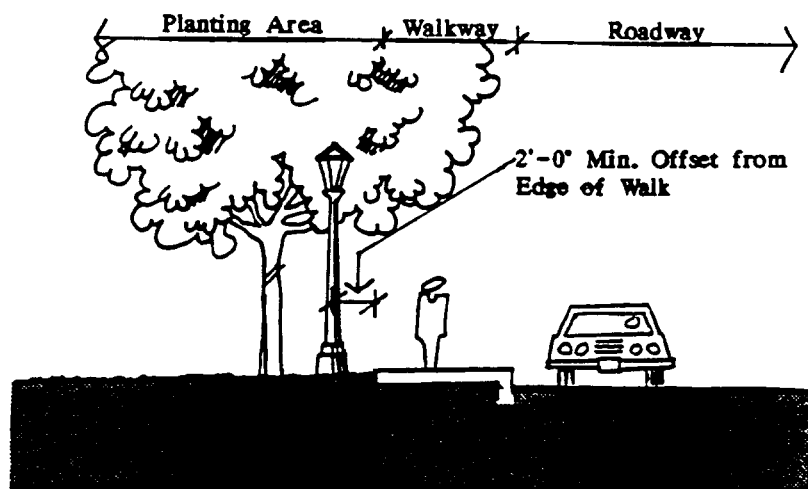
Pole height: 12'

Pole spacing: 55' o.c.
(± 1.5 footcandles)**Pedestrian areas**

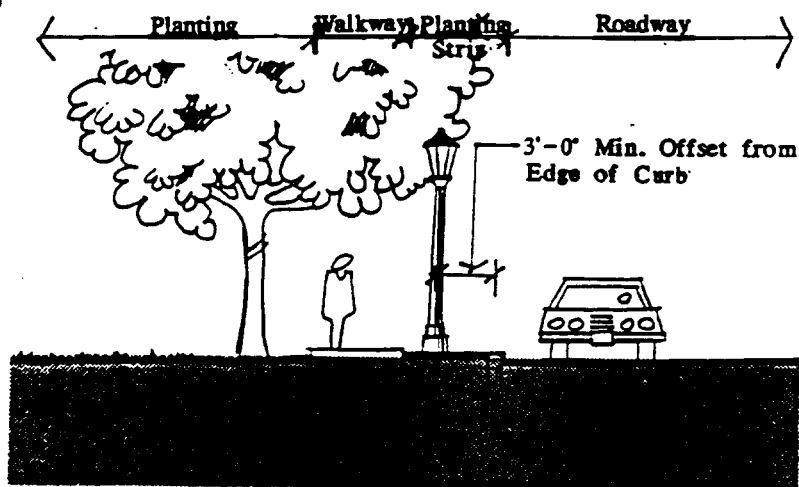
Pole height: 12'

Pole spacing: 50' o.c.
(± 2 footcandles)**Pedestrian areas**

Pole height: 10'

Pole spacing: 50' o.c.
(± 2 footcandles)

POST LANTERN ADJACENT TO WALKWAY



POST LANTERN ADJACENT TO STREET

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Lighting and Utilities

GW VC HF CC SS BH OS

Utilities Matrix

Utility Type	Visual Zone							Action to be taken
	GW	VC	HF	SS	CC	BH	OS	
1. Existing overhead utilities	●	●	●		●	●		A. Wherever possible, place utility lines underground. B. Where underground placement is not possible, relocate to the rear of buildings and in service areas.
2. New utilities	●	●	●	●	●	●	●	A. Locate underground wherever feasible.
3. Existing/New transformers and substations	●	●	●	●	●	●	●	A. Near buildings locate to the rear and/or rear service areas; screen with walls, fences, berms, or planting size of unit to be as small as possible. B. Along roadways screen from view with berms, plantings, and fencing. Use existing vegetation for screening as much as possible.
					●	●		

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Lighting and Utilities

GW VC HF CC SS BH OS

Utilities Matrix

Utility Type	Visual Zone							Action to be taken
	GW	VC	HF	SS	CC	BH	OS	
4. HVAC units	●	●	●	●	●	●	●	A. Locate within service areas or to rear of buildings. Screen.
	●	●	●		●			B. In areas of extremely high visibility, every effort should be made to place units on top of the building screened from view by a parapet or screen wall.
								C. Window AC units should be eliminated in all zones.
5. Storm inlets	●	●	●	●	●	●	●	A. Install bike-proof grates.

This matrix is a brief summary of the existing and proposed utilities on post, and how they are to be screened or relocated within each visual zone.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Section 3-6

Signs

Signs

GW VC HF CC SS BH OS

General Notes

Signage throughout the installation must be skillfully managed and coordinated according to an overall Signage Master-plan, prepared and maintained by the DPW. (See TM5-807-10 "Signage" for further guidance on developing this master-plan).

Presently, several different sign types are used with varying degrees of success. A standard "shield" shaped sign board has been used for many signs and has been effective in projecting a distinctive institutional image for the post. However, the single size of that format has been somewhat limiting when numerous messages must be presented. This has in some areas required several signs to be installed close together, causing the appearance of clutter and redundancy.

The goal of these design criteria is the establishment of a hierarchy of information and sign type which presents information clearly, projects a unified image and is flexible and adaptable to accommodate a wide range of message requirements. The pages that follow describe a coordinated "menu" of signboard types and sizes, which will allow for the shield to be used for specific identification purposes, while rectangular shapes will be used for all directional and directory information.

Even with the most extensive design controls, however, any signage policy must be skillfully adapted to each situation. Although the appearance of consistency and standardization is important, this effect can only be achieved by carefully adapting signage design criteria to particular circumstances. Rigidly applied controls frequently result in specific solutions that are uniform, but appear to be inappropriate.



POST IDENTIFICATION SIGN AT MAIN GATE

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

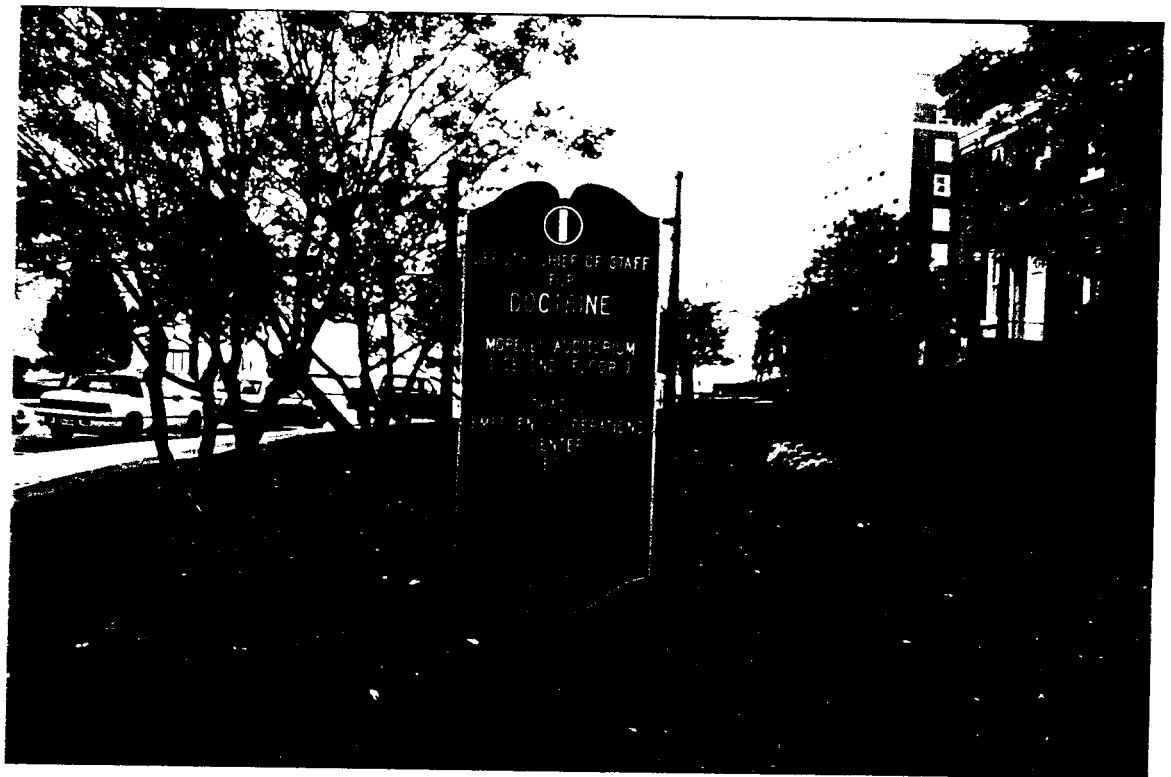
Signs

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General Notes

Most important, the information itself must be carefully condensed and organized on the signs in an efficient hierarchical fashion. The spatial arrangement of the information on each sign is itself part of the message, and is as important as the specific wording.

TM5-807-10 Signage must continue to serve as the primary source for guidance on message content, typography, and organized arrangement of the information on the sign board. The design criteria included here provide guidance on the size and shape of the sign board, materials, and fabrication of the supports, and special considerations related to the "shield" sign shape.



STANDARDIZED SHAPES AND MOUNTING HEIGHTS
CAN HELP REDUCE THE APPEARANCE OF SIGN
CLUTTER AT THE MAIN GATE.

□ AR □ LA □ CE □ ME □ EE □ MT

Signs

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Sign Types and Dimensions

Recommendations for selecting sign types and panel sizes:

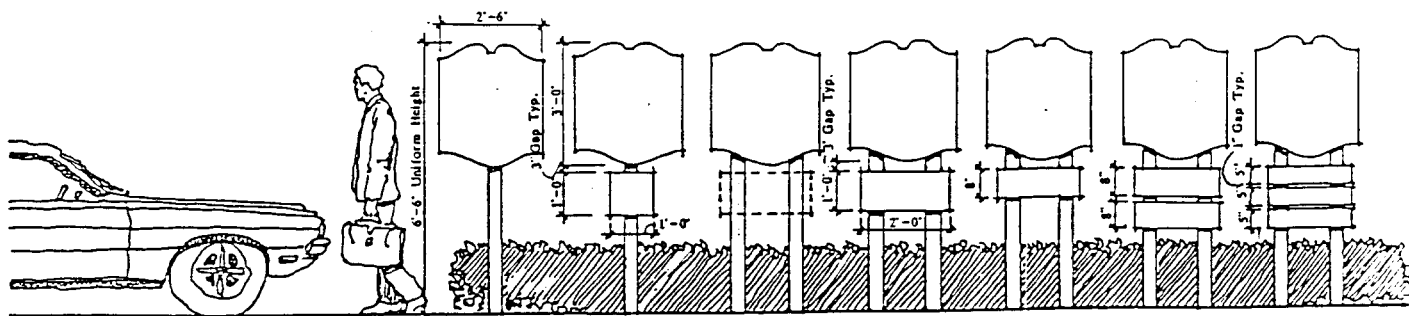
The illustrations on the next page demonstrate most all choices and combinations necessary to accommodate any message requirement. Limit choices to those pictured here so that signage throughout the post will be coordinated.

Certain sign sizes and shapes must be visually associated with specific categories of information. Message types must therefore be restricted to a limited set of sign size/shape options. Refer to the chart on the following page (6.1, page 2) for permitted sign type choices for your message type.

Type A (shields) are to be used only for identification signs at the location of the facility identified. Arrows, directional or directory information are not permitted on the shield. Shields must be reserved for identifying major functions. Use type B8 for minor identification signs.

Type A (shields) are to be used sparingly. They are very special signs which must command attention. Never mount more than one shield per sign post; never locate within 50 feet of another type A sign. Where more message space is required, use secondary sign panels for directory-type listings of facilities.

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT



Single Supports

A1.
Shield Only.A2.
Shield plus small
secondary sign.

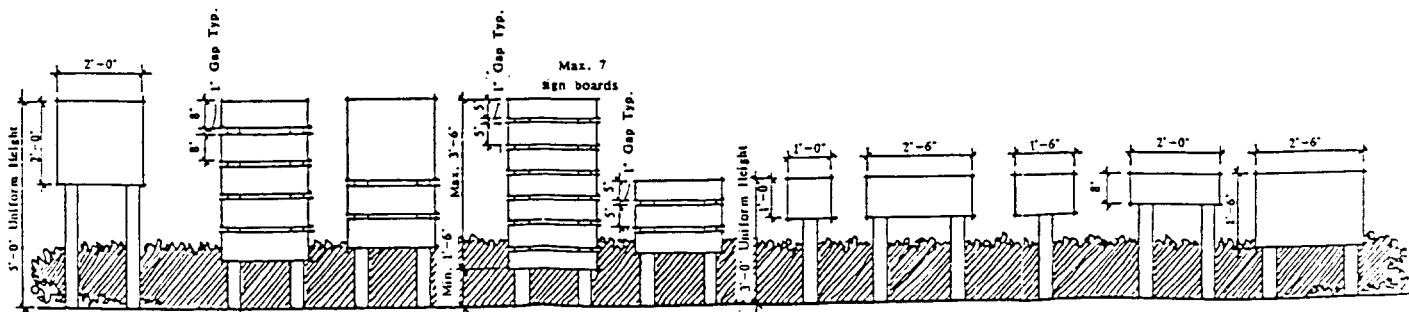
Double Supports

A3.
Shield with
allowance for
future secondary
sign.A4.
Shield with 12"
secondary sign.

A5.

A6.

A7.

B1.
Single large panel.B2.
Series of
medium size
panels for
changeable messages.B3.
Combination.B4.
Directory or
directional series,
4 to 7 panels.B5.
Directory or
Directional
3 panels.B6.
Small single
square panel.B7.
Medium
size panel.B8.
Medium
size panel.B9.
Medium
size panel.B10.
Large angle
panel.

Signs

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Sign Types and Dimensions

All signs to be mounted at one of the following uniform mounting heights (see illustrations for complete dimensions):

- 6'6" for all type A signs
- 5'0" for all large type B signs
- 3'0" for all small type B signs

Choose a sign sized as small as possible which will adequately do the job. Choose the 3' mounting height, rather than the 5' height for type B signs whenever possible.

Identification signs are those that state the name of the building or facility at that location. *Directional signs* point the way to a destination with an arrow. *Directory signs* are those that list a series of destinations within a building or in an area of the post, and may serve as secondary information to an identification sign. *Informational signs* convey other general messages such as schedules, policies or regulations. *Mandatory signs* carry imperative regulatory messages such as warnings and restrictions.

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Type of Message Required	Type of Sign (D.C.6.1):					
	Identification Signs	Directional Signs	Directory Signs	Informational Signs	Mandatory/Prohibitory Signs	Motivational Signs
● Permitted						
▲ Not Permitted						
○ Message Permitted on Secondary Sign Board Only						
A1 Shields	●	▲	▲	▲	▲	▲
A2	●	○	▲	○	▲	▲
A3	●	▲	▲	▲	▲	▲
A4	●	○	○	○	▲	▲
A5	●	○	○	○	▲	▲
A6	●	○	○	▲	▲	▲
A7	●	○	○	▲	▲	▲
B1 Rectangular	▲	▲	▲	●	●	●
B2	▲	▲	●	▲	▲	▲
B3	▲	▲	○	●	▲	○
B4	▲	●	●	▲	▲	▲
B5	▲	●	●	▲	▲	▲
B6	▲	▲	▲	●	●	●
B7	▲	▲	●	●	●	●
B8	●	▲	▲	●	●	●
B9	▲	▲	●	●	▲	●
B10	▲	▲	▲	●	●	●

Signs

GW VC HF CC SS BH OS

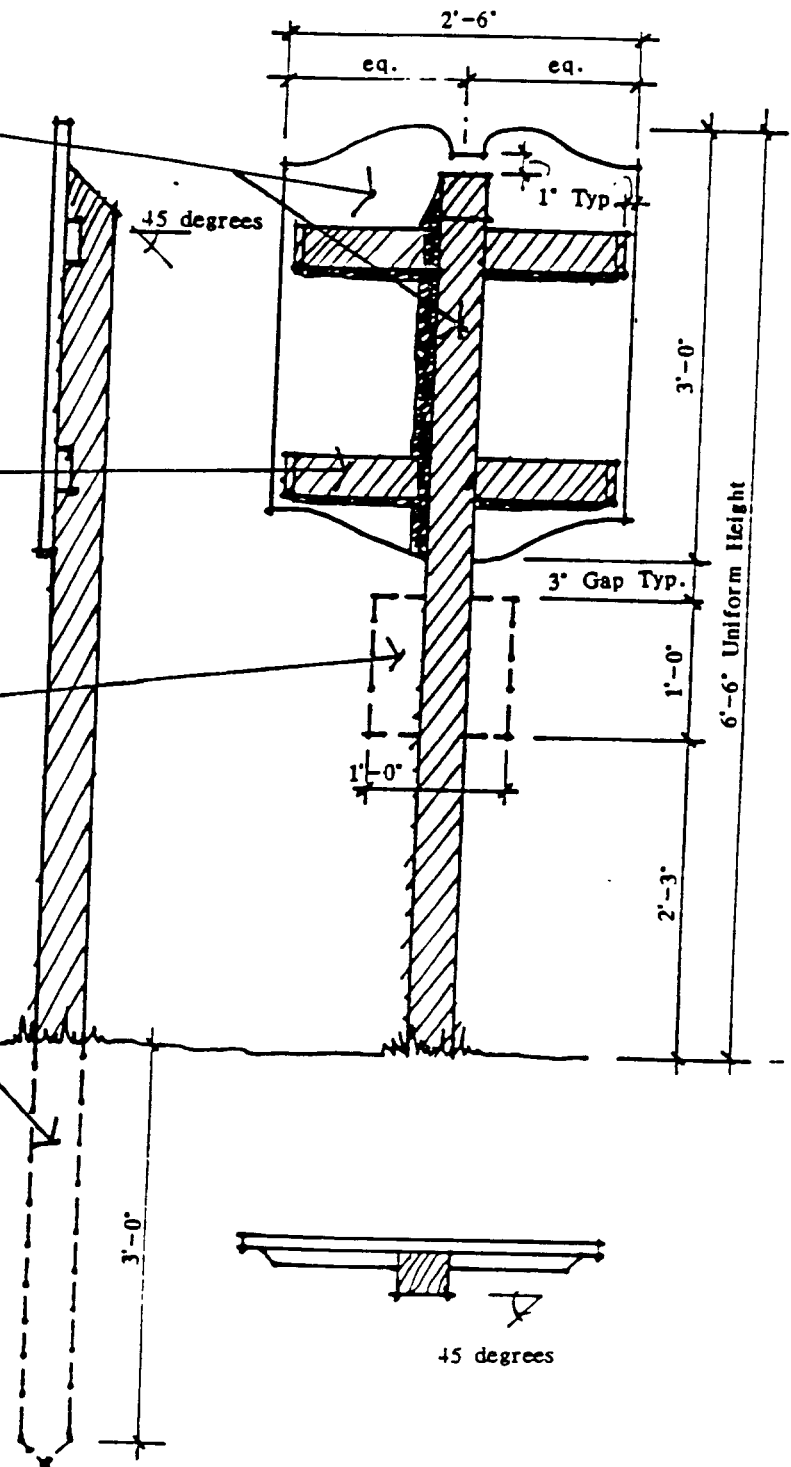
Materials and Fabrication
Type A: Single Support

Signboard to be 10 or 12 gauge, painted, galvanized steel, sheet metal fastened to 2 x 4 cross pieces at 4 corner points with round-headed galvanized #5, 1½" wood screws. Post to be 4 x 4 pressure-treated wood (treated with pentachlorophenol). Cut top at 45° angle.

Cross pieces to be 2 x 4 pressure-treated wood. Fasten to vertical post using mortise joint and two galvanized hex. head 3" lag bolts.

Where additional directory or directional information is necessary, do not clutter the "shield," but use a single square sign below (maximum 12" square).

Plant post firmly in ground minimum 3' deep (or deeper where high winds and sandy soil require).



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Signs

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Materials and Fabrication**Type A: Double Support**

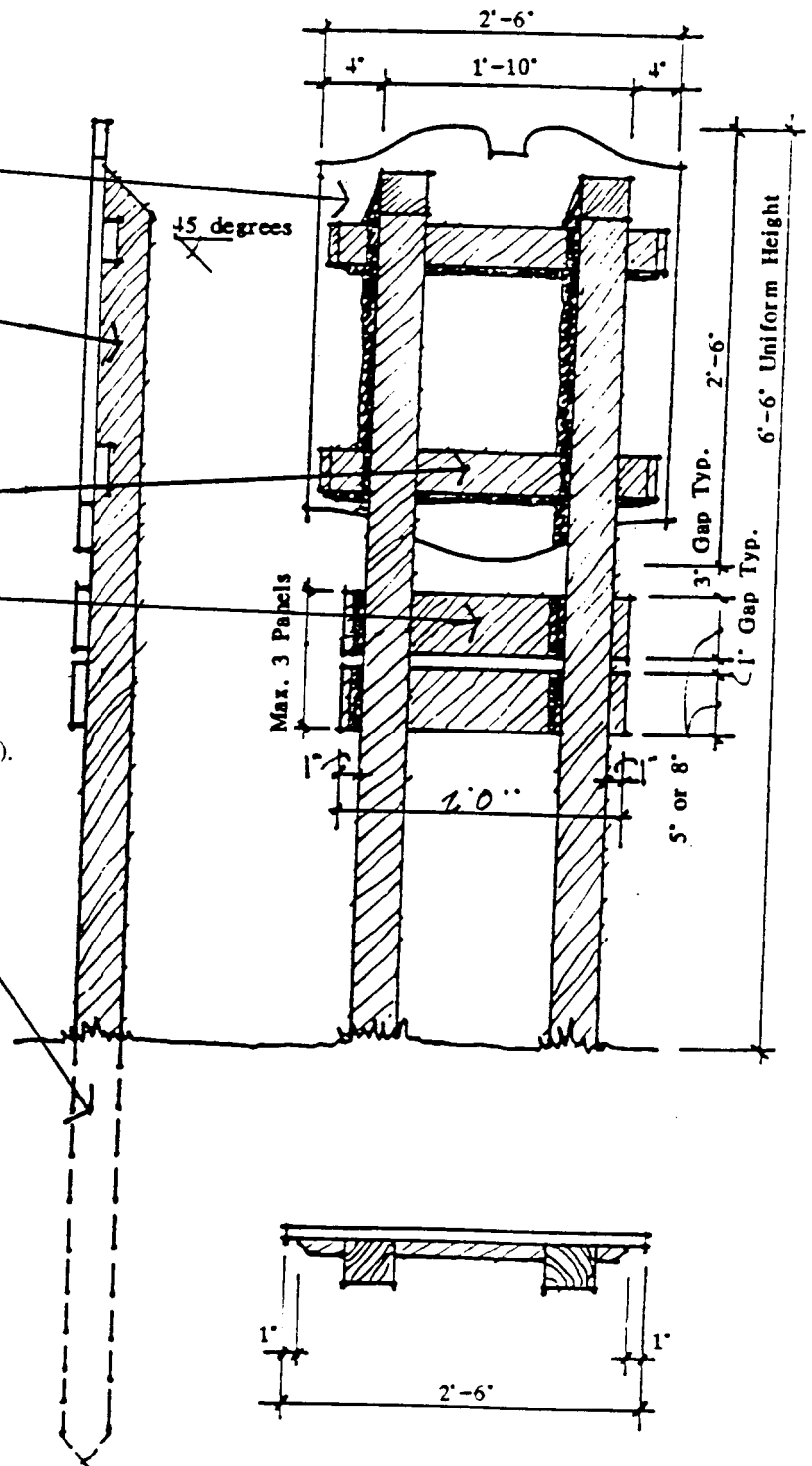
Sign board to be 10 or 12 gauge painted galvanized sheet metal. Fasten to wood cross-piece at 4 corner points with round-headed galvanized #5, 1½ wood screws.

Posts to be 4 x 4 pressure-treated wood (treated with pentachlorophenol). Cut top at 45° angle.

Cross pieces to be 2 x 4 pressure-treated wood. Fasten to vertical post using mortise joint and two galvanized hex. head 3" lag bolts.

Where additional directory or directional information is necessary, do not clutter the "shield," but use secondary signboards (see D.C. 6.1 for choices available).

Plant post firmly in ground - minimum 3' deep (or deeper where high winds and sandy soil require).



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Signs

GW VC HF CC SS BH OS

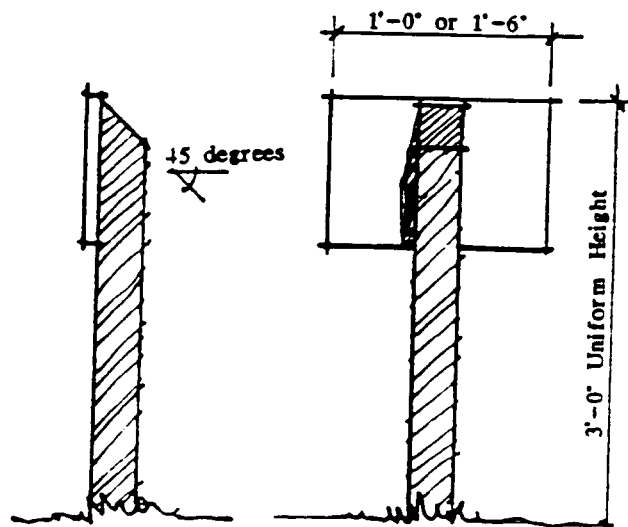
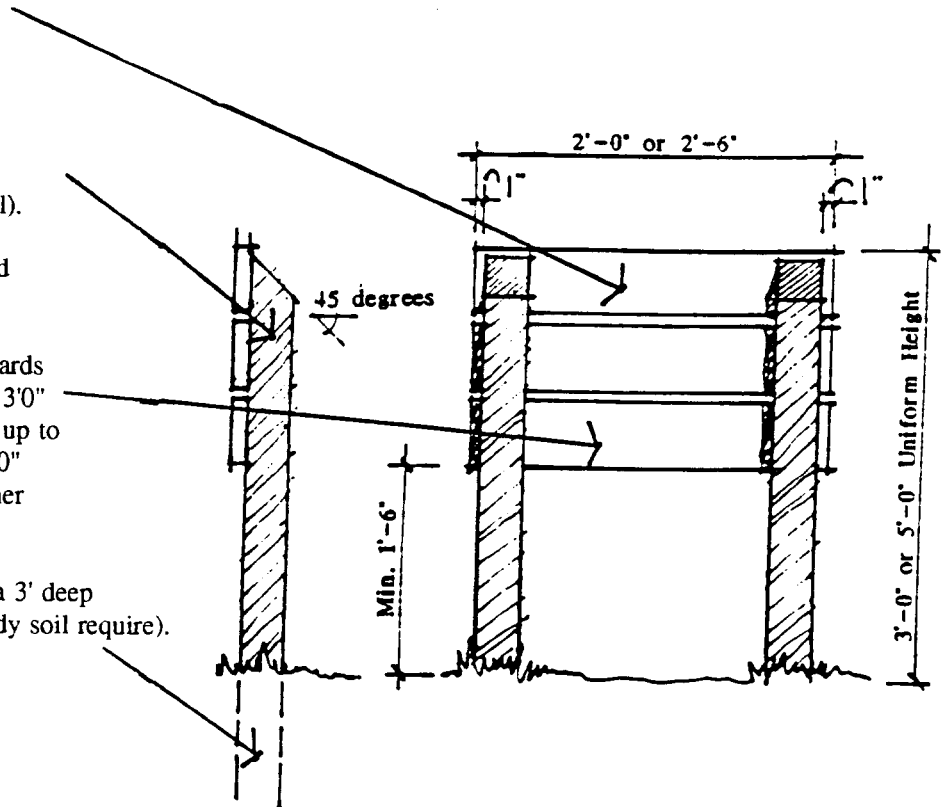
Materials and Fabrication**Type B**

Sign board to be 10 or 12 gauge painted galvanized sheet metal. Fasten to vertical posts using two round-headed galvanized #5-1½ wood screws at each end of sign.

Posts to be 4 x 4 pressure-treated wood (treated with pentachlorophenol). Cut top at 45° angle. Posts must be absolutely straight, plumb and aligned with each other.

Use up to three individual 5" sign boards for directory/directional messages on 3'0" standard height. Where required use up to seven individual 5" sign boards on 5'0" standard height. See D.C. 6.1 for other combinations and choices.

Plant post firmly in ground, minimum 3' deep (or deeper where high winds and sandy soil require).



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Signs

GW VC HF CC SS BH OS

Typography

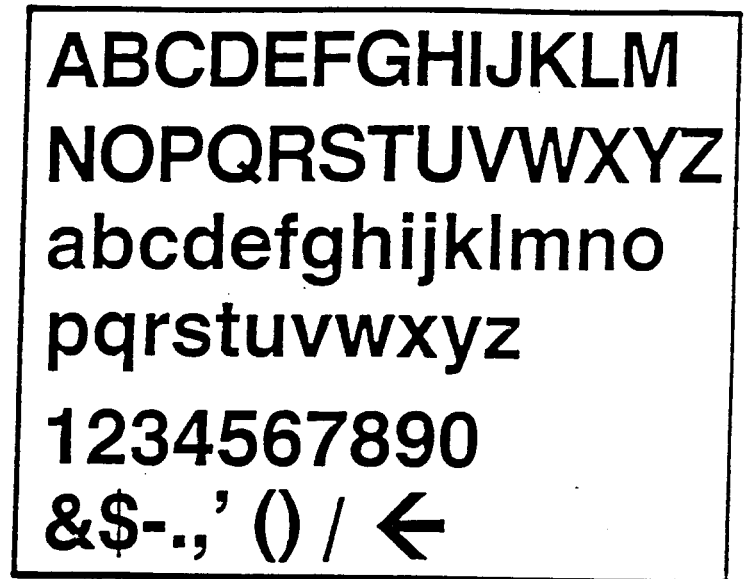
Typeface Style

Two typefaces are to be used on the post signs: helvetic medium and helvetic regular. Traffic control signs are exempted (they should follow *Standard Alphabets for High Signs and Pavement Markings* published by Federal Highway Administration).

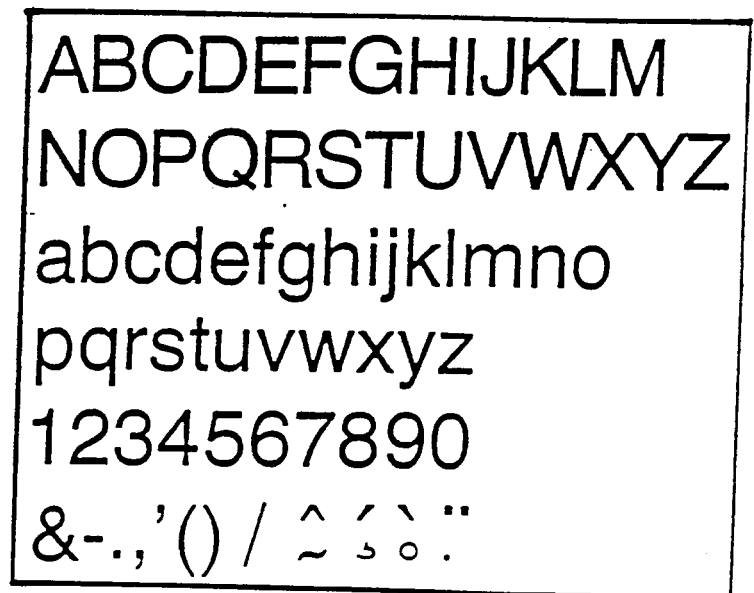
Helvetica medium is to be used for major information on all signs such as the primary name of a building, or general name of an area such as "Command Center." Use *Helvetica medium* for all directional signs (wherever an arrow is used).

Helvetica regular is to be used for secondary information, such as the names of commanders, or specific units within building and other short messages which support the primary information.

Note -- Because typefaces are not absolutely standardized, the examples to the right are to serve as the official standard to be matched on all signs.



HELVETICA MEDIUM



HELVETICA REGULAR

☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

Signs

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Colors

Paint both front and back face of sign board in black.

Paint 3/8" wide border in gold.

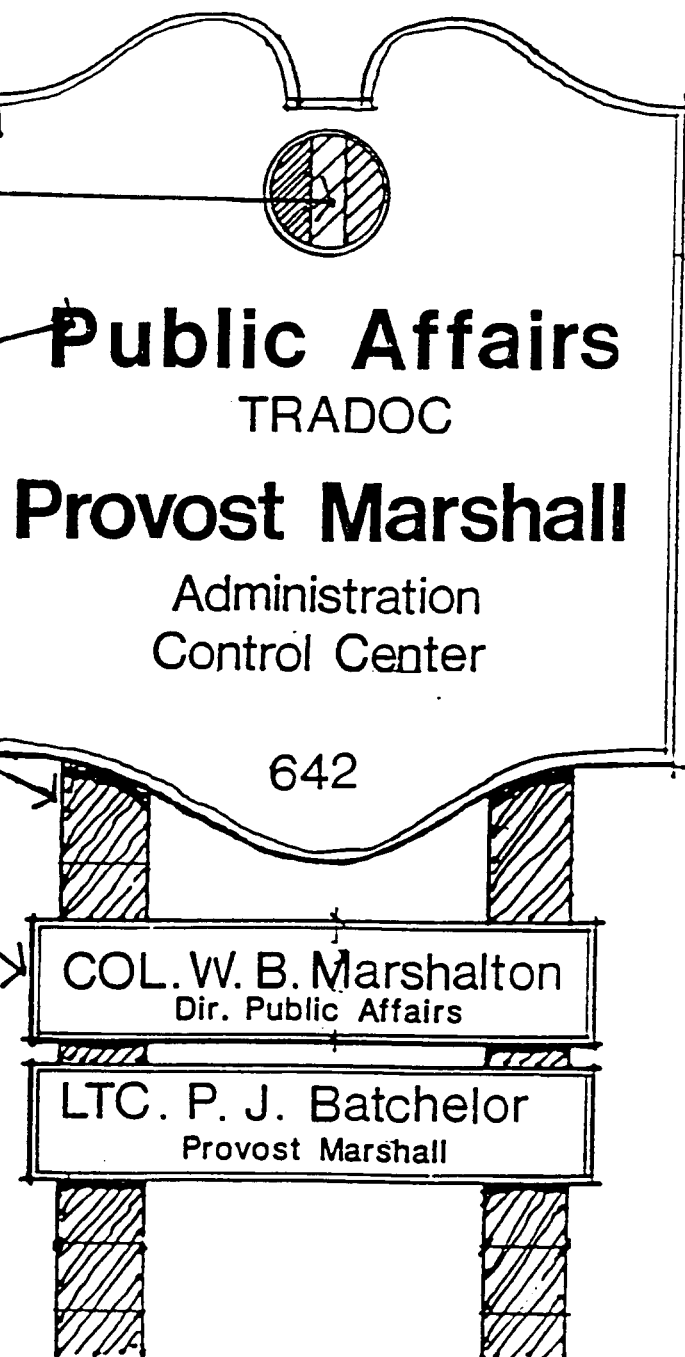
Unit insignia in standard colors of emblem. Outline in gold to distinguish from black background.

Lettering to be gold adhesive-backed vinyl die-cut type, reflective to auto headlights at night. (See pg. 2-2, TM5-807-10 for additional guidance).

Supports to be unfinished pressure-treated wood, stained with a dark brown opaque wood preservative if desired.

Secondary sign colors to match primary signs.

Red band on regulatory signs are to match PMS#032C, or if painted, match Sherwin-Williams BM1-7. Exclaimer word on red band to be white letters reflective at night.



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Signs

GW VC HF BH CC SS OS

Type A (Shield)

5" high unit insignia or emblem 1" from top of sign, centered.

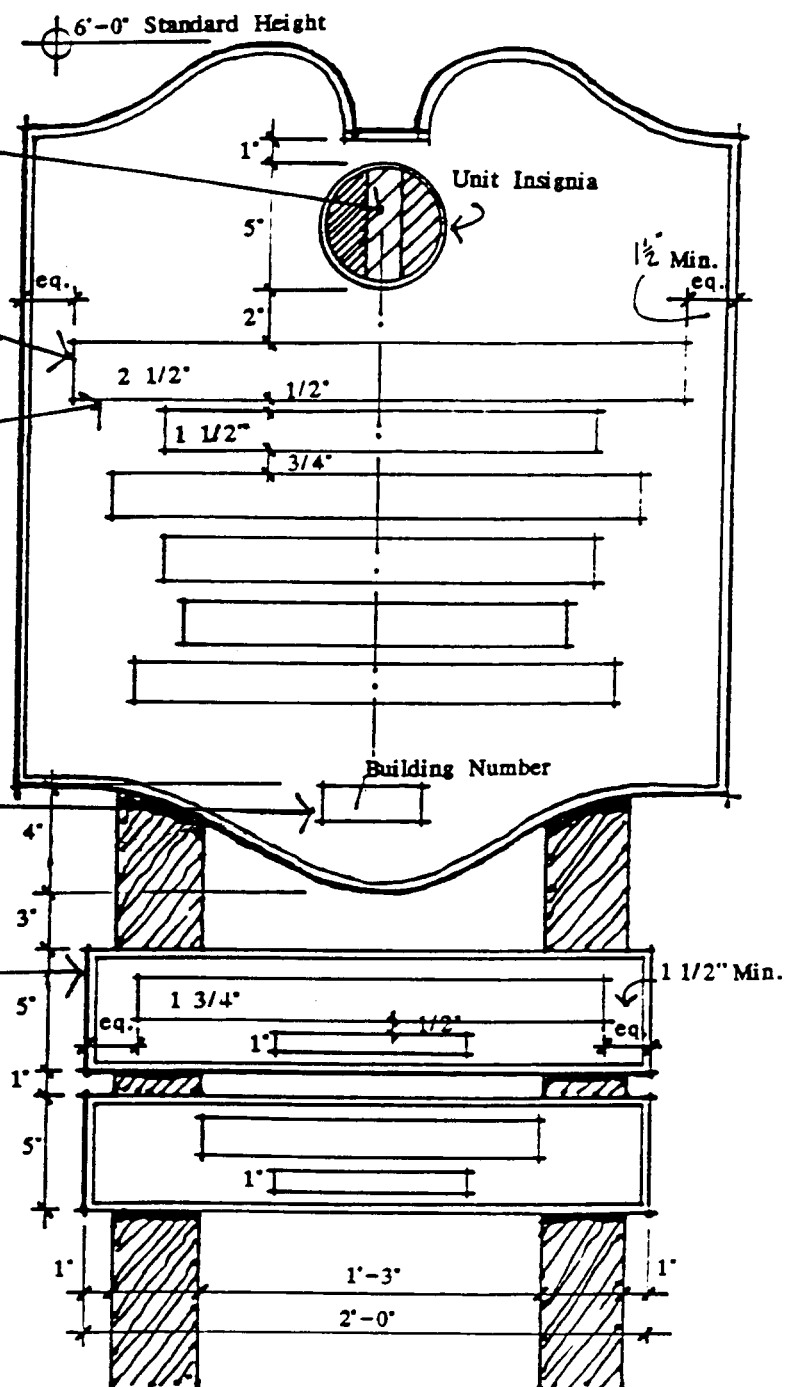
All messages to be centered on sign with equal space remaining on right and left sides. Minimum 1½" space at edge of sign.

Use 2½" high helvetica medium letters for primary information, such as name of unit or building function.

Use 1½" high helvetica regular letters for secondary information, such as name of sub-units, secondary functions or commander's titles.

Position building number at bottom of sign. Use 1½" high helvetica regular.

Use secondary sign boards for directory or directional messages to avoid crowding or confusing the shield.



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Signs

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Type B: Directional/Directory

Use helvetica medium, upper and lower case letters for all destinations.

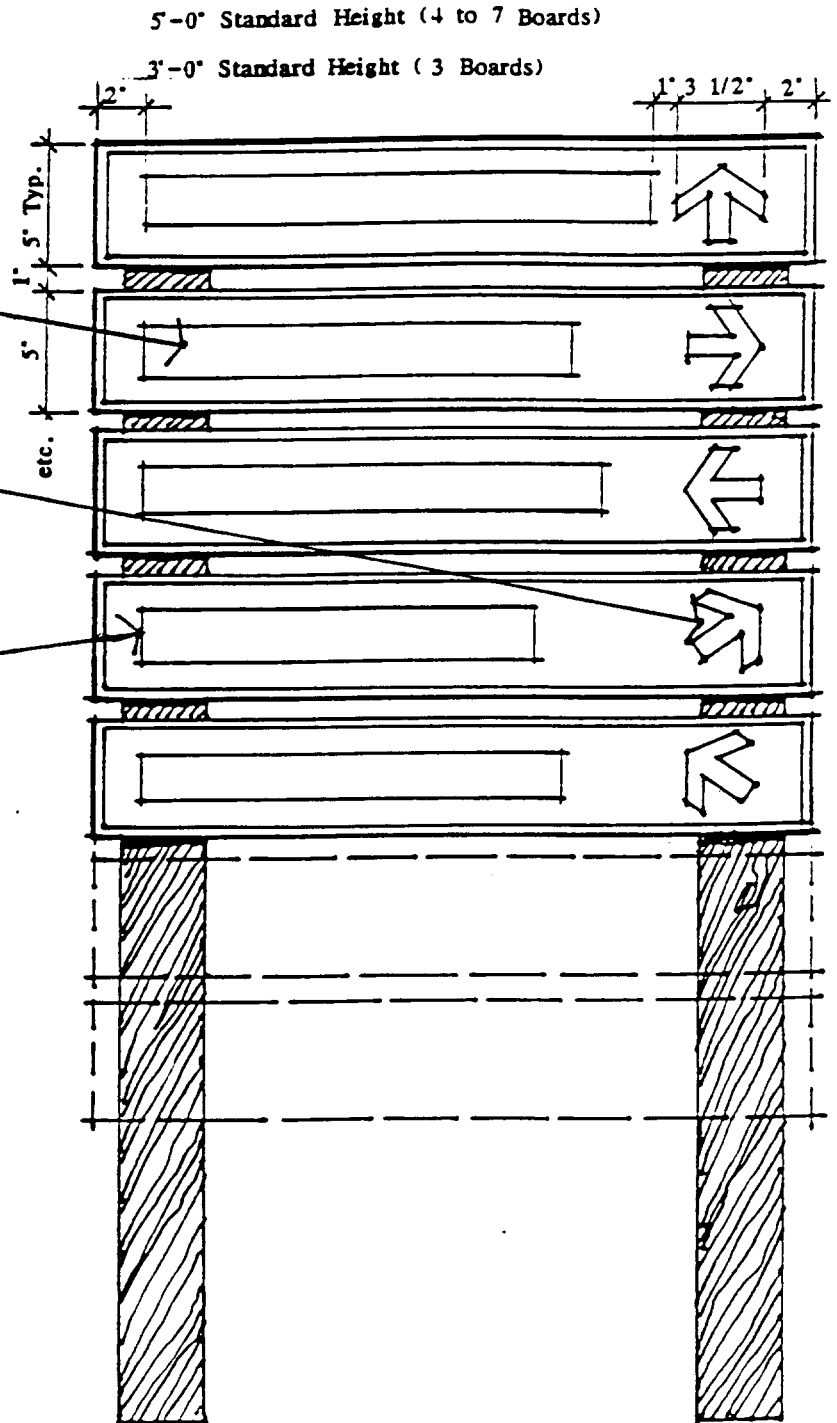
Identify in brief terms the destination.
Use 2½" high upper and lower case letters, maximum 1'4" long in total (approximately 20 characters).

Use 4" high/wide arrows, positioned consistently at right side of sign. (See page 2-5 TM 5-807-10 Signage for exact shape of arrow).

Lettering on each sign is to be positioned "flush left," beginning consistently 2" from the left edge of the sign.

Important Note:

Keep messages brief. Directional messages must be read and understood quickly.



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Signs

GW VC HF CC SS BH OS

Type D: Regulatory/Informational

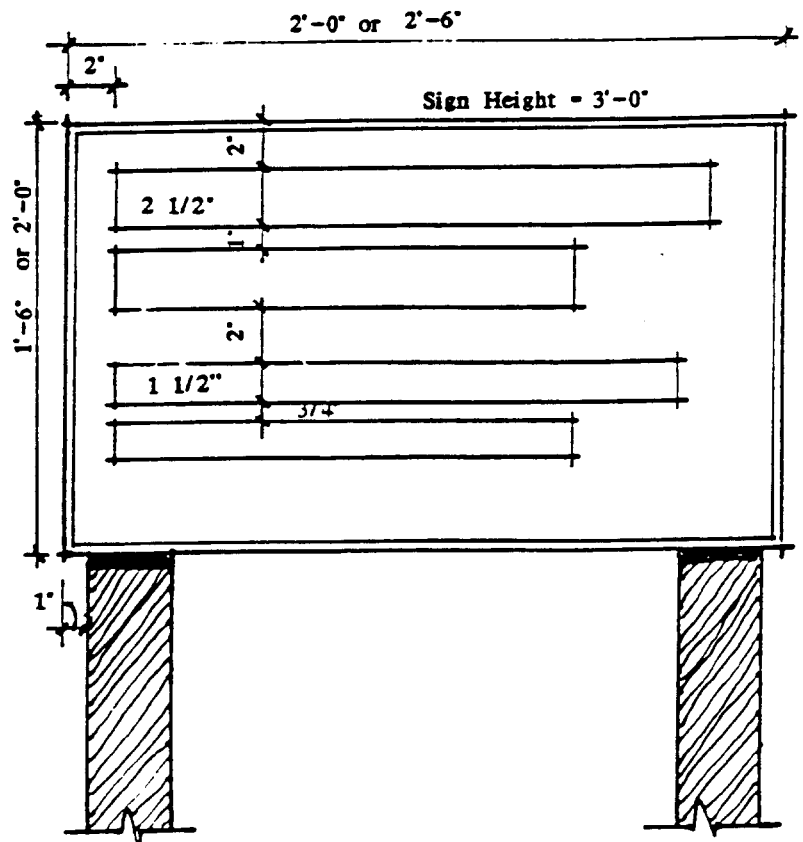
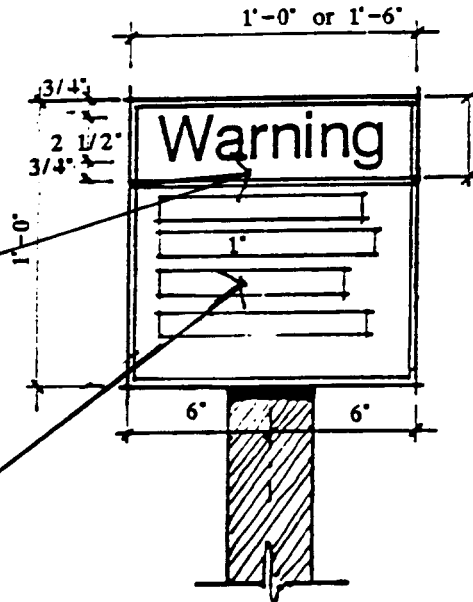
Mandatory information, regulations, prohibitions and warning messages must be distinguished from other sign types by use of separate sign boards with an accent stripe.

Use a red 4" high horizontal band at the top of the sign,

Use an exclaimer word, such as "Attention," "Caution," or "Warning" in 2½" high white/reflective helvetica medium letters centered on the red band,

Position the message below the stripe in 1" high letters, flush left 1½" from the edge of the sign.

General information on medium sized sign boards to be presented in 1" to 2½" high letters beginning flush left 2" from the edge of the sign. Primary information in 2½" letters; secondary information in 1" or 1½" letters. Use only two different letter sizes per sign.



☐ AR ☐ LA ☐ CE ☐ ME ☐ EE ☐ MT

